AI NAVIGATORS / ERASMUS+

BEST PRACTICES
NORTH MACEDONIA

Collection of eight AI-enhanced teaching practice presentations

Project No. 2024-1-MK01-KA220-SCH-000253777

Co-funded by the European Union

GOOD PRACTICE: AI-ENHANCED LESSON

AI Navigators – Empowering Teachers for the AI Era

FRANCHISE AGREEMENT

Commercial Law | Economics, Law and Trade sector

Igor Hristov • Ljupcho Santov, Kochani

North Macedonia | Age 17 | 45 minutes

Learning objectives

Define a franchise agreement and its characteristics.

Identify franchisor and franchisee roles, rights and obligations.

Analyse real-world franchise examples.

Compare advantages and disadvantages.

Form an evidence-based opinion on franchising.

The learning challenge

Warm-up | approximately 5 minutes

How do global brands operate across countries while maintaining consistent standards?

Students explore McDonald’s, KFC, Starbucks and Subway.

A short video and guided questions introduce franchising as a form of business cooperation.

Where AI added value

ChatGPT: explanations, examples, discussion questions and a quiz.

Canva AI and Gamma AI: presentations and visual learning materials.

MagicSchool AI: differentiated activities and formative assessment.

YouTube video with AI-supported summary: lesson introduction.

AI prompt example

A concrete prompt documented by the teacher

"Explain the concept of a franchise agreement in an understandable way for 17-year-old students; prepare an example from practice, a table with the rights and obligations of the contracting parties, discussion questions, and a short quiz to test knowledge."

Classroom implementation

Teacher presentation: agreement, parties, rights, obligations and examples.

Pair work: analyse a hypothetical McDonald’s franchise in Macedonia.

Identify the franchisor, franchisee, rights, obligations and benefits.

Whole-class discussion: Would you start a business through a franchise?

Differentiation and inclusion

Students work in pairs or small groups on tasks of varying complexity.

Guiding questions and visual materials support learners needing additional help.

Advanced learners compare different commercial agreements.

ChatGPT and MagicSchool support preparation of differentiated tasks.

Assessment and reflection

Formative assessment: oral discussion, case-study analysis, observation and a short quiz.

Success criteria: explain franchising, identify parties and apply knowledge to a case.

Teacher reflection: students participated actively; AI tools and case studies supported understanding and motivation.

Why this is a good practice

Based on the submitted AI-enhanced lesson plan

AI supports the teacher in planning, visualisation, differentiation and assessment.

Students apply legal and business concepts to a realistic scenario.

The lesson combines discussion, collaboration and critical thinking.

The teacher has approved sharing this lesson plan as a good-practice example.

Project information

AI Navigators – Empowering Teachers for the AI Era

Project No. 2024-1-MK01-KA220-SCH-000253777

Teacher: Igor Hristov | Ljupcho Santov – Kochani

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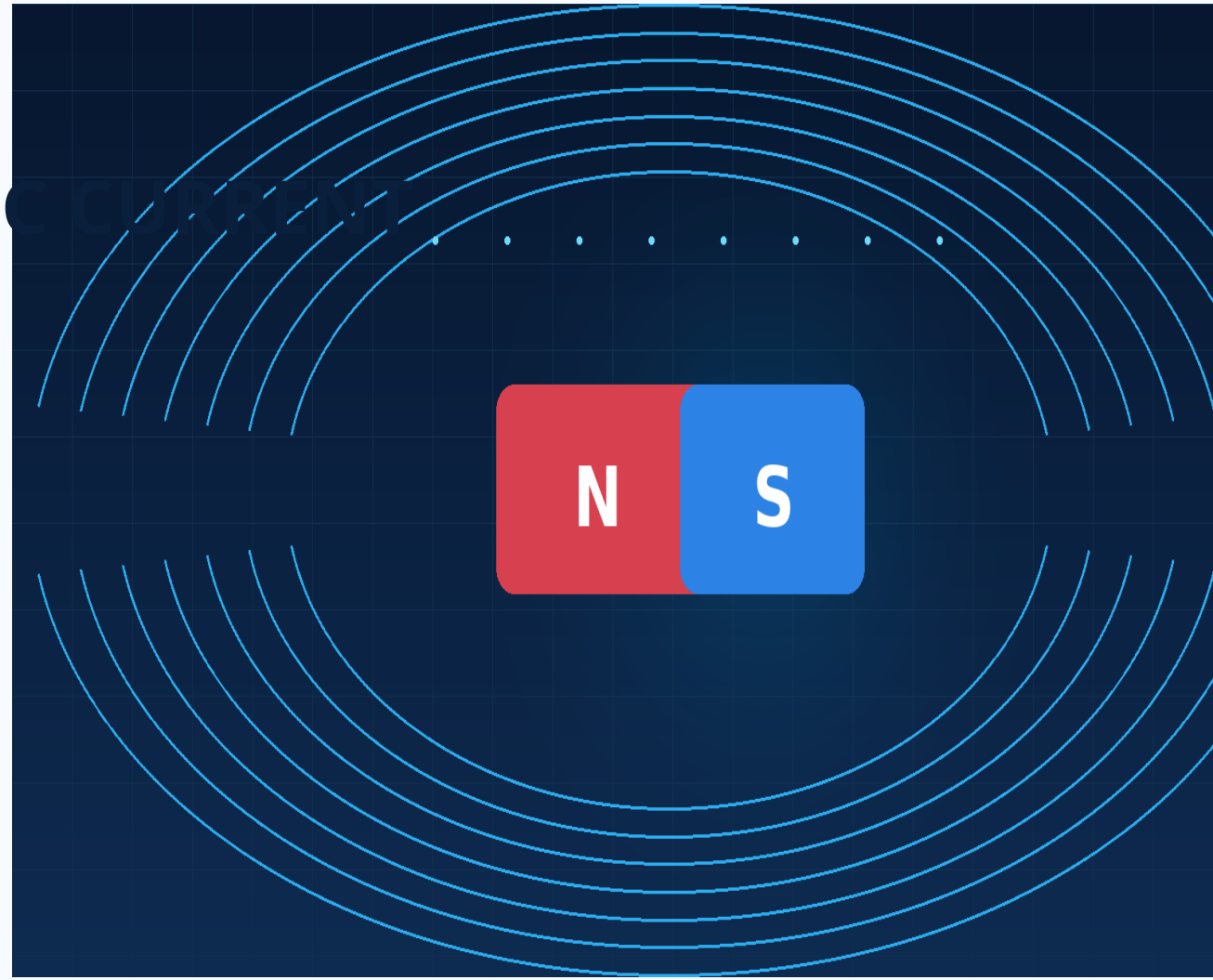
MAGNETIC FIELDS FROM MAGNETS TO ELECTRIC CURRENT



AI-enhanced physics lesson • Age 15 • 45 minutes

ASUC “Boro Petrushevski” | North Macedonia

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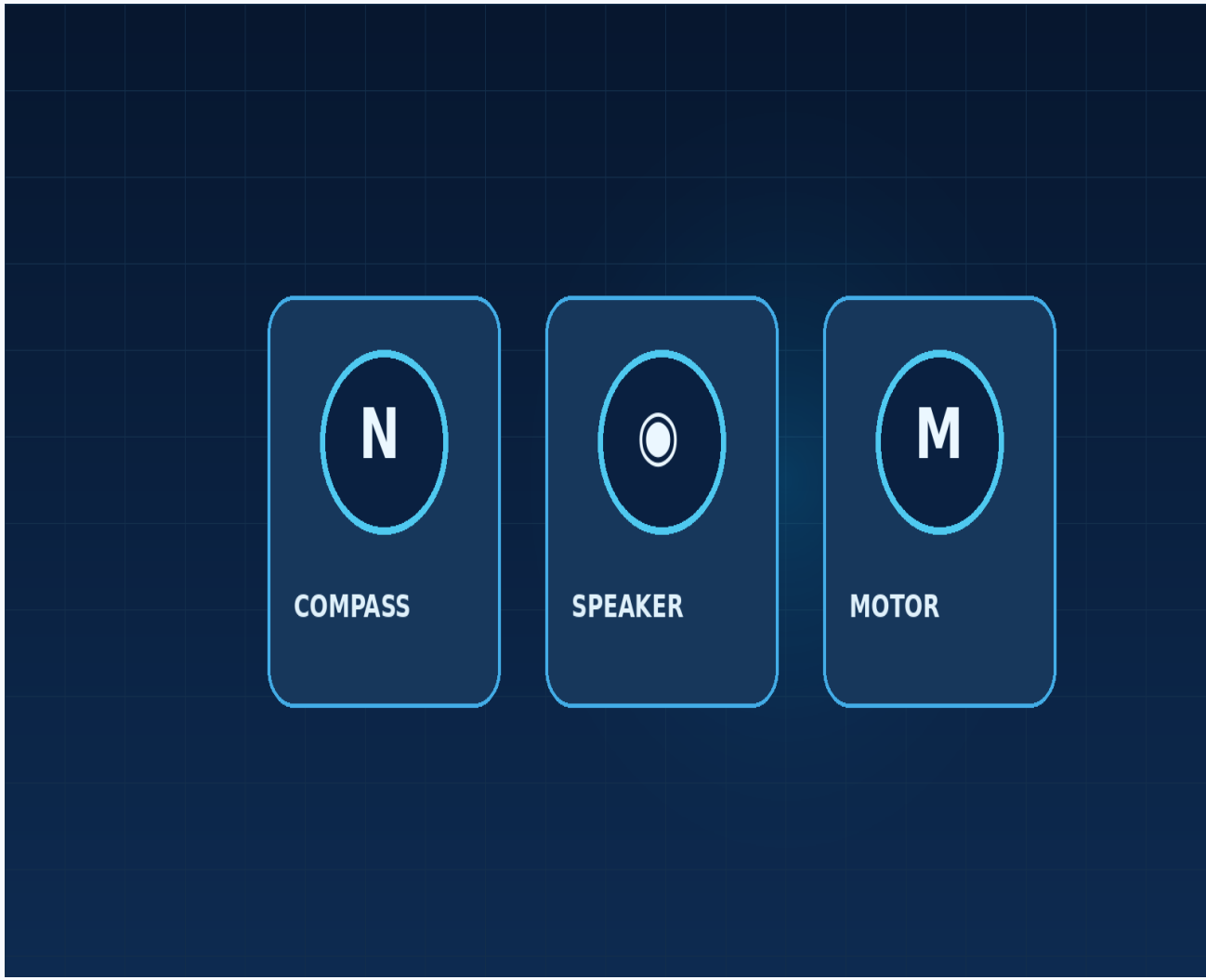
THE TEACHING CHALLENGE

- Magnetic fields are invisible.
- Students need a visual bridge from theory to real life.
- AI-assisted illustrations make abstract concepts easier to discuss.



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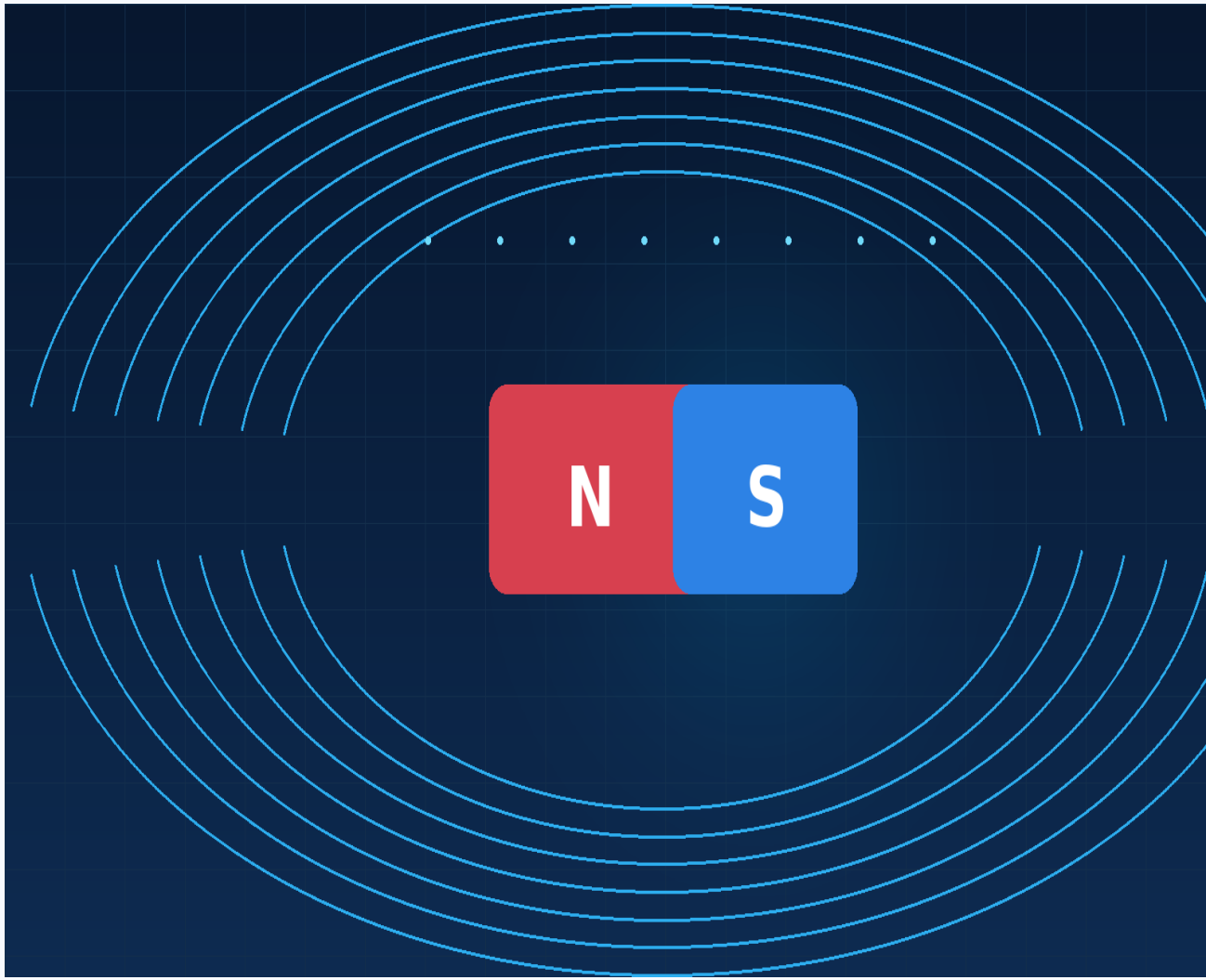
LEARNING OBJECTIVES

- Describe properties of magnetic fields.
- Identify the north and south magnetic poles.
- Explain the magnetic effect of electric current.
- Connect magnetism with everyday devices.



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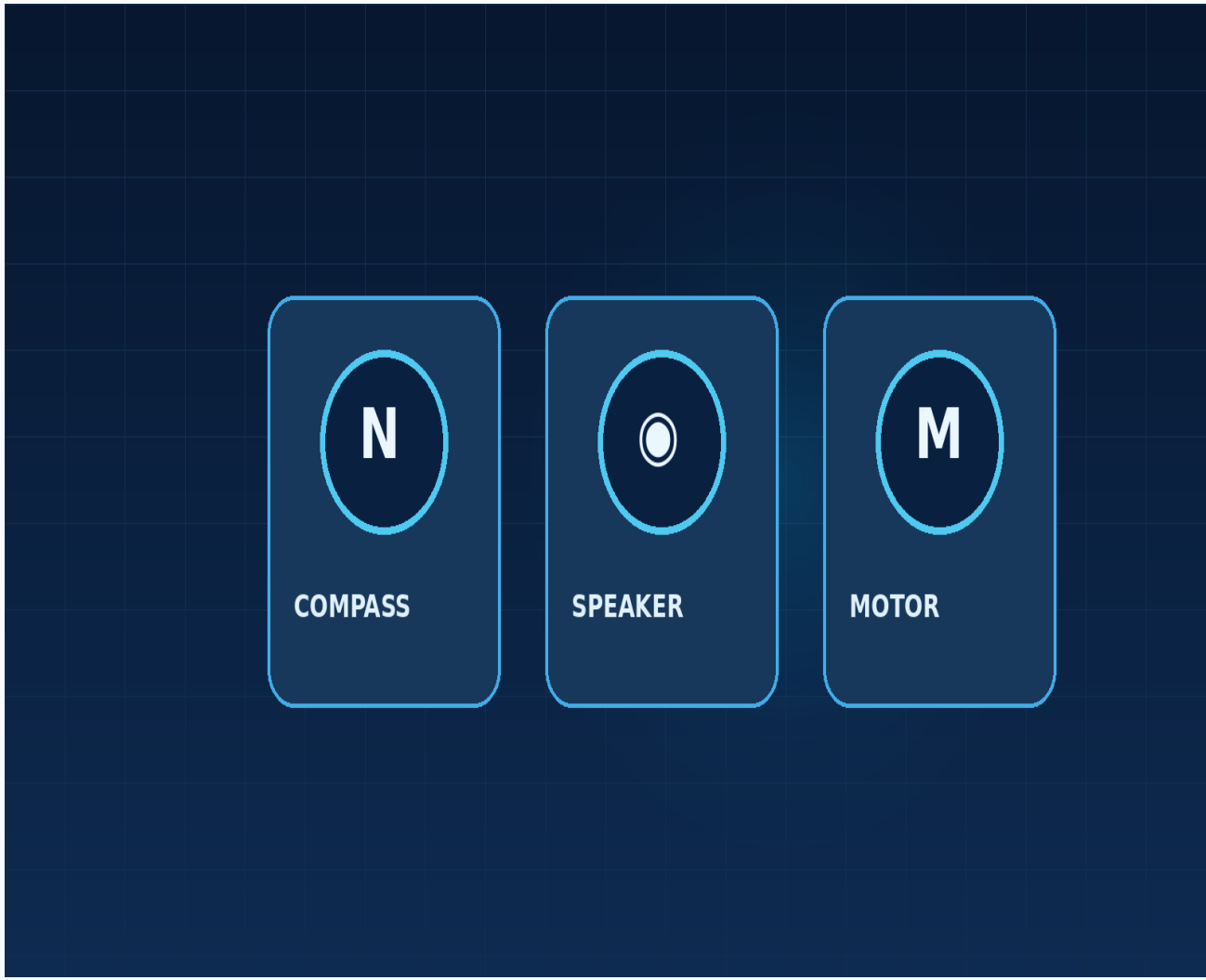
WARM-UP / 5 MINUTES

Where do we encounter magnets?

- Brainstorm: fridge, speakers, phones, motors and compasses.
- Record students' ideas on the board.
- Introduce the key question: How can current produce a magnetic field?



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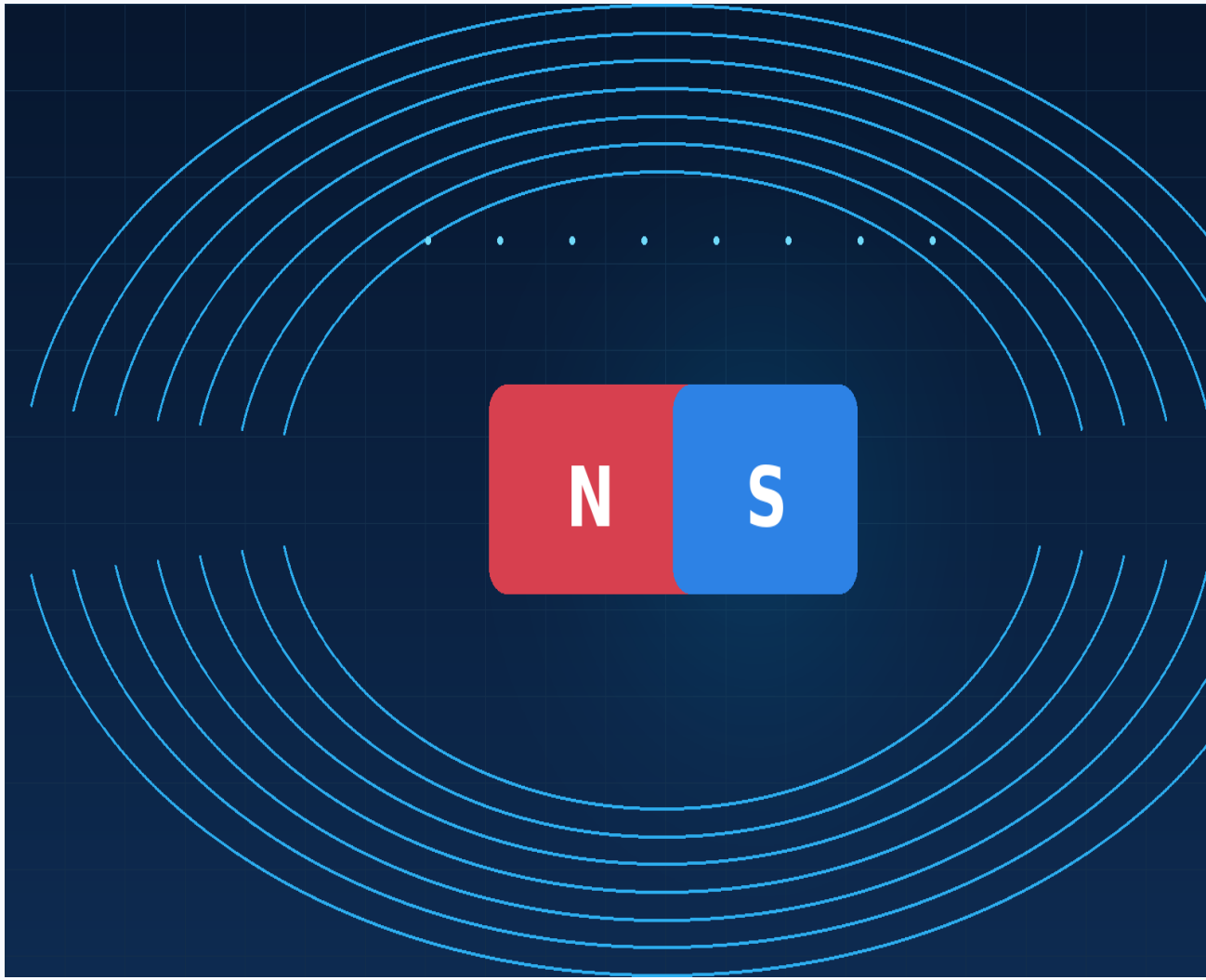
VISUAL DEMONSTRATION

- Permanent magnet: field lines connect the poles.
- Discuss the direction of the field outside the magnet.
- Use the AI-generated graphic to support explanation.



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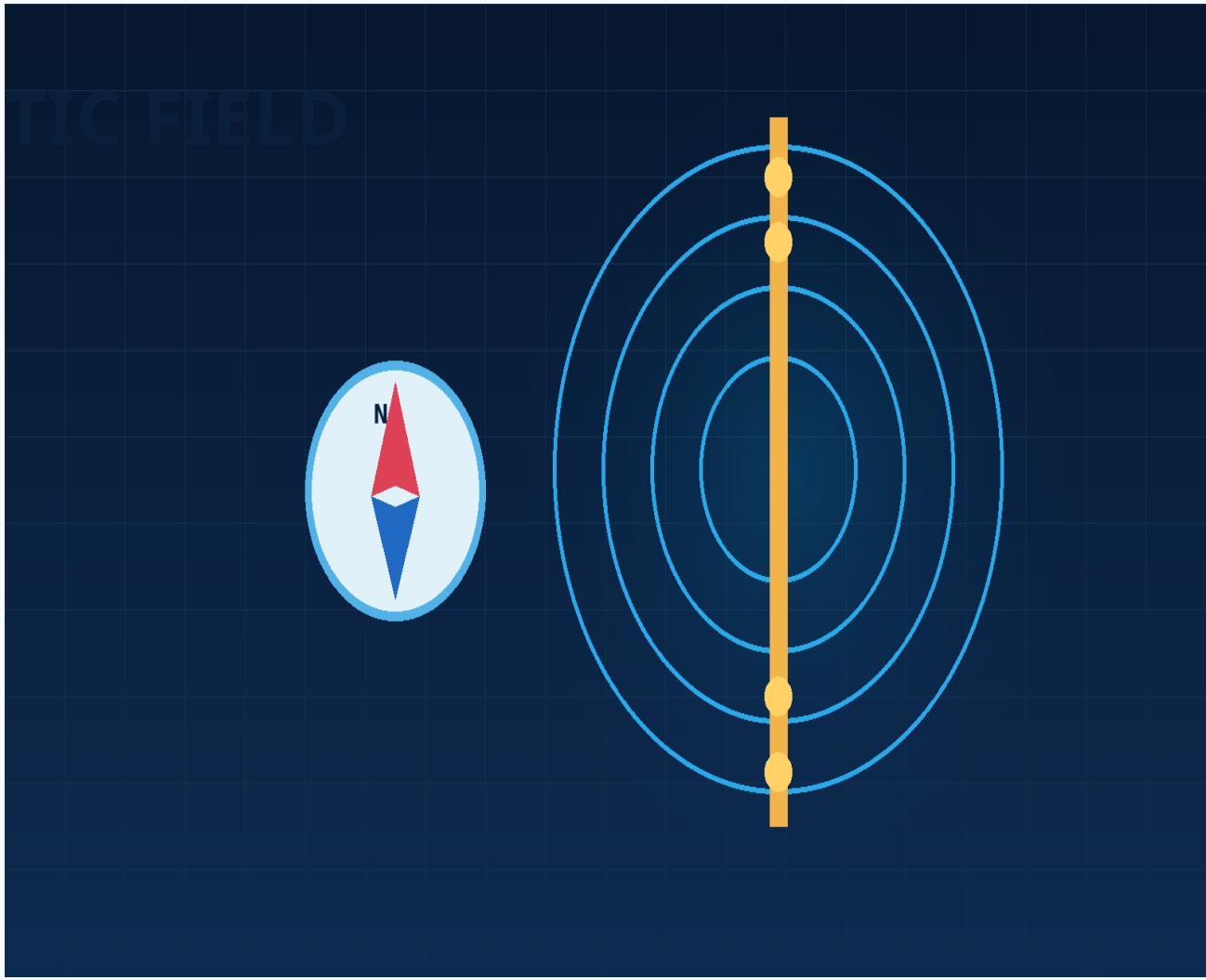
CURRENT CREATES A MAGNETIC FIELD

- A current-carrying wire produces a field around it.
- Circular field lines surround a straight conductor.
- A nearby compass needle responds to the field.



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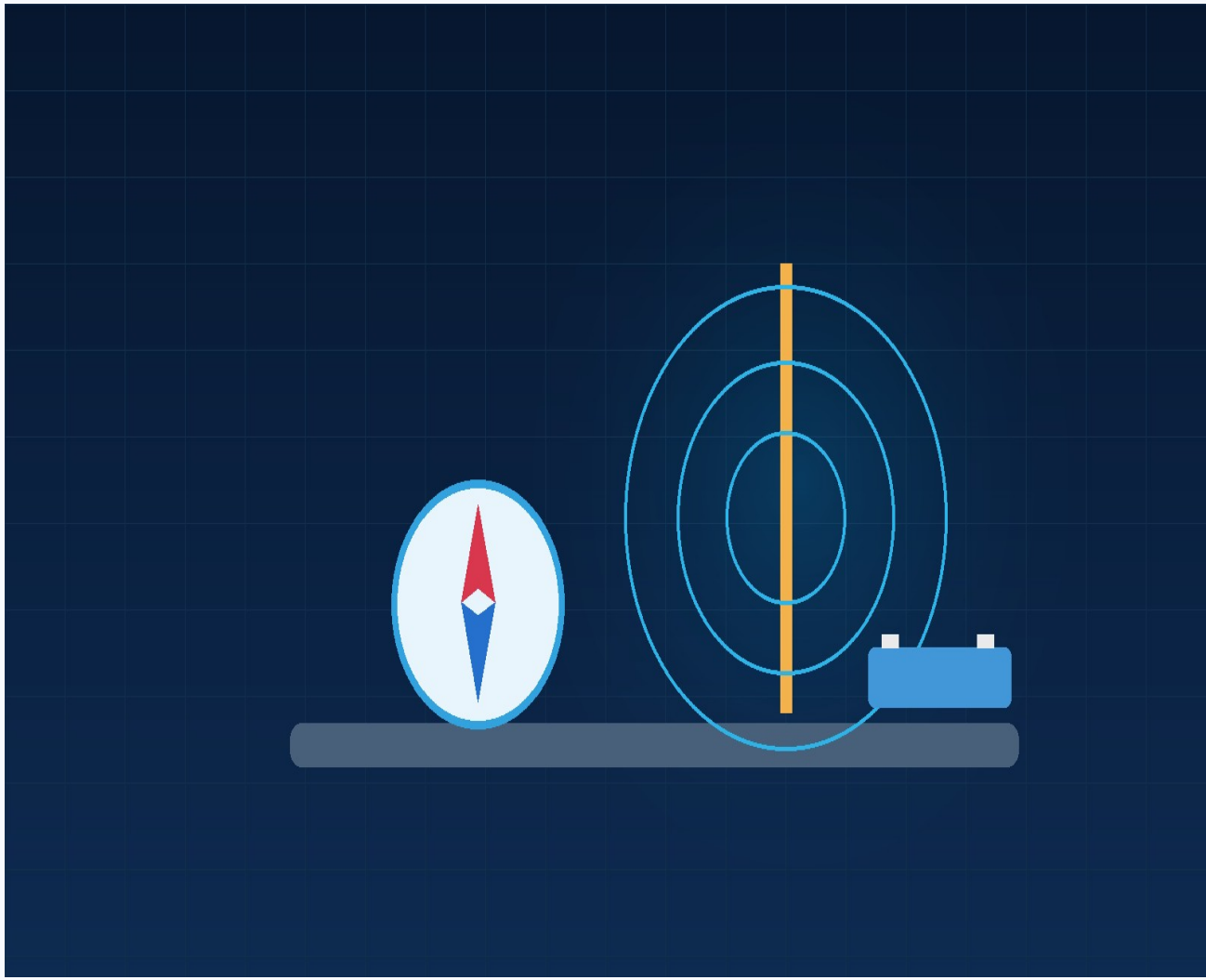
HANDS-ON INVESTIGATION

- Set up a compass near a straight conductor.
- Use a low-voltage supply with teacher supervision.
- Briefly connect the circuit and observe the needle.
- Discuss how the observation supports the concept.



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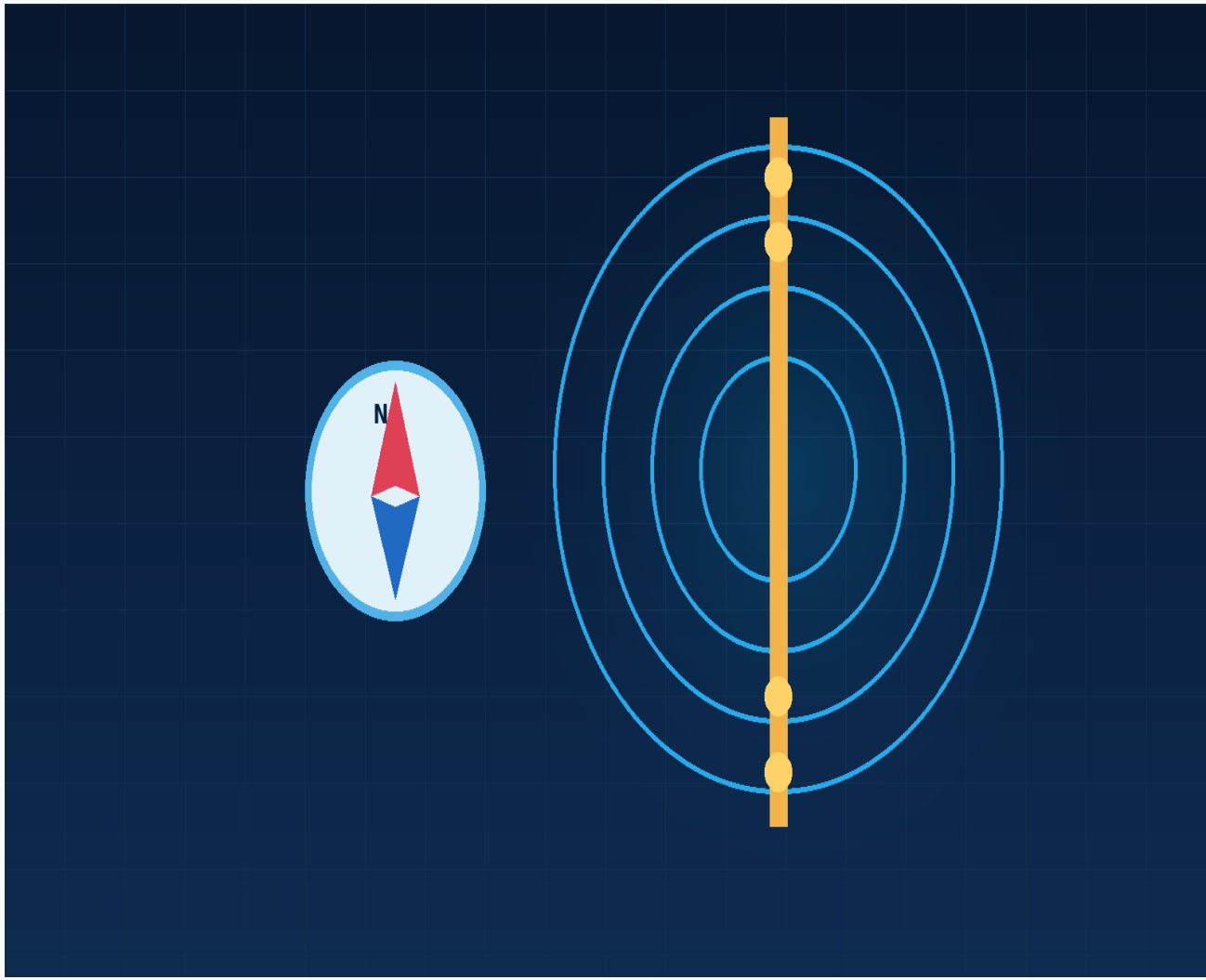
DIFFERENTIATED LEARNING

- Analytical: predict deflection and explain the field.
- Practical: assemble and observe the demonstration.
- Creative: design a magnetic-field mind map.
- Supported: identify objects and answer guided questions.



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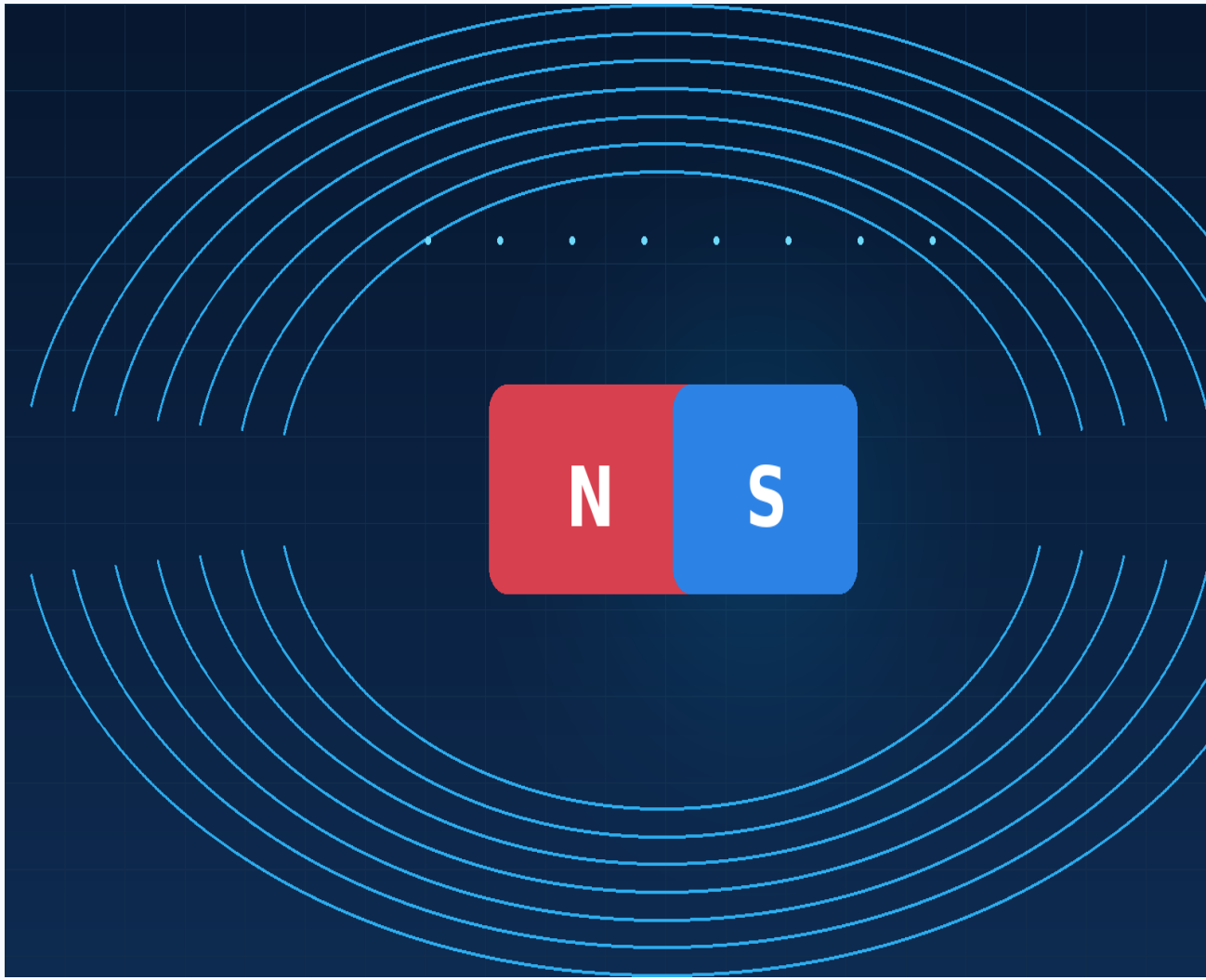
HOW AI WAS USED

- ChatGPT helped design the brainstorming activity.
- AI-supported visuals illustrated magnetic phenomena.
- ChatGPT supported differentiated learning tasks.
- An AI-generated quiz was used for formative assessment.



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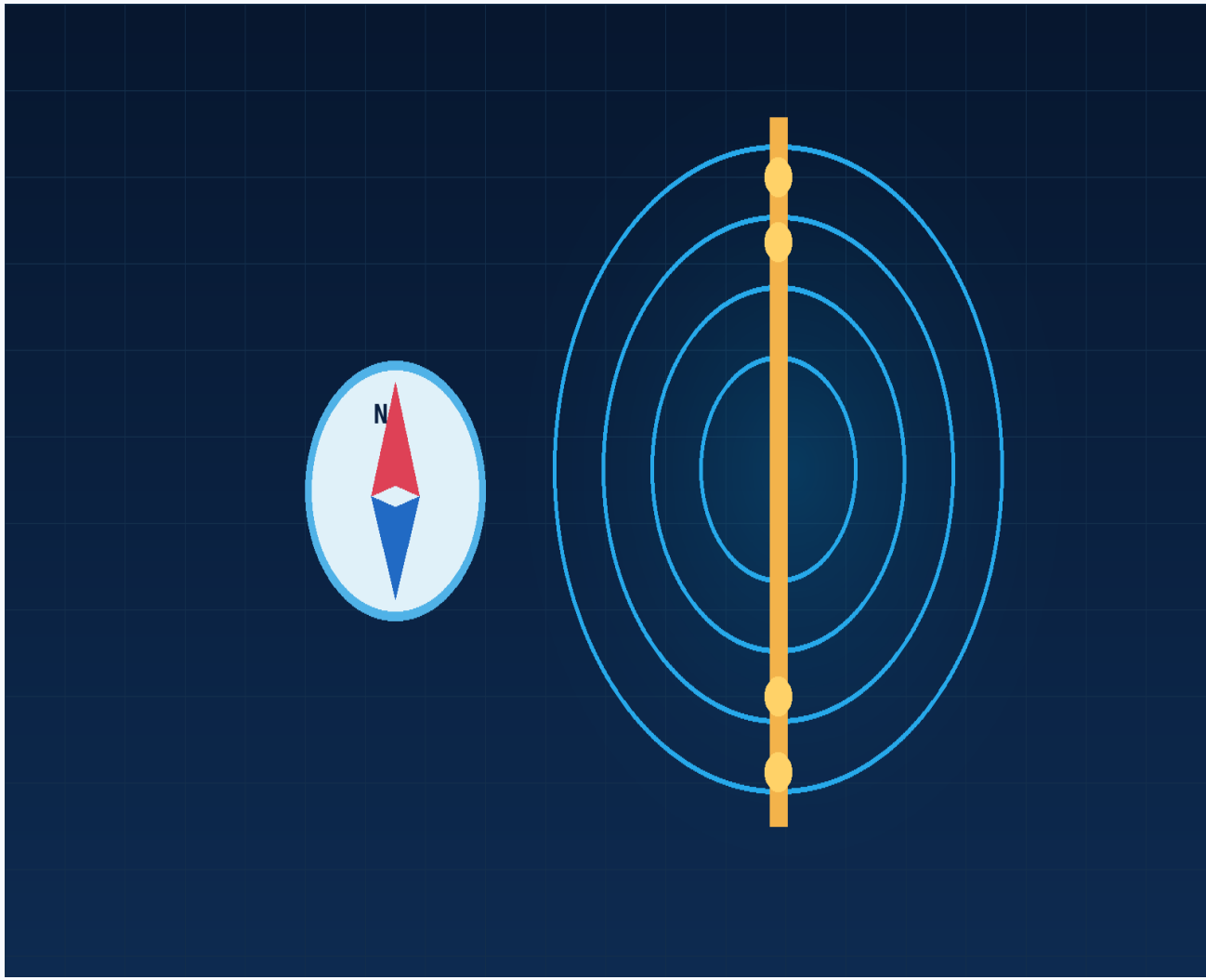
FORMATIVE ASSESSMENT

- Identify poles and recognise magnetic field patterns.
- Explain compass deflection near a current-carrying wire.
- Relate magnetic fields to motors, speakers and compasses.
- Use an AI-generated quiz to check understanding.



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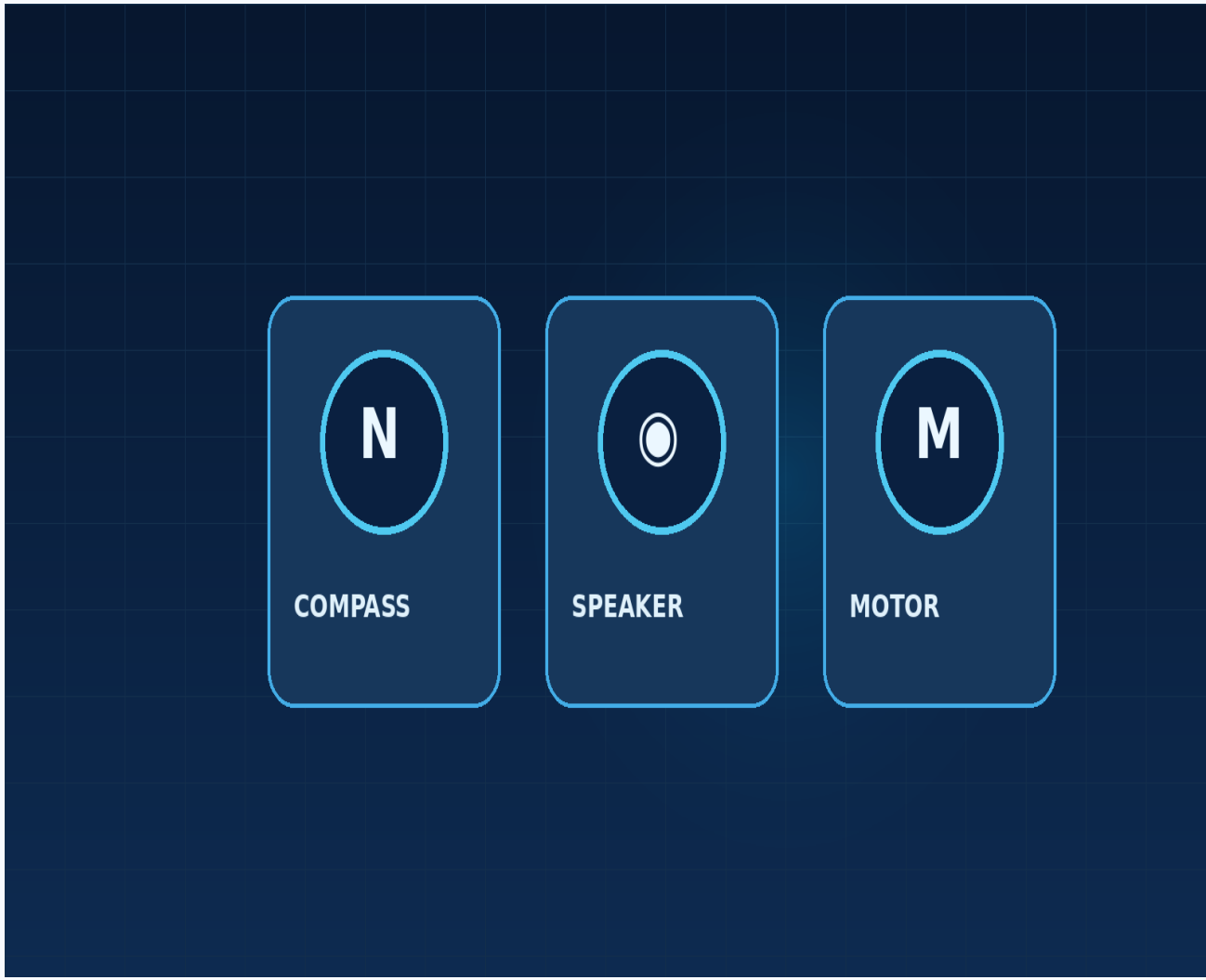
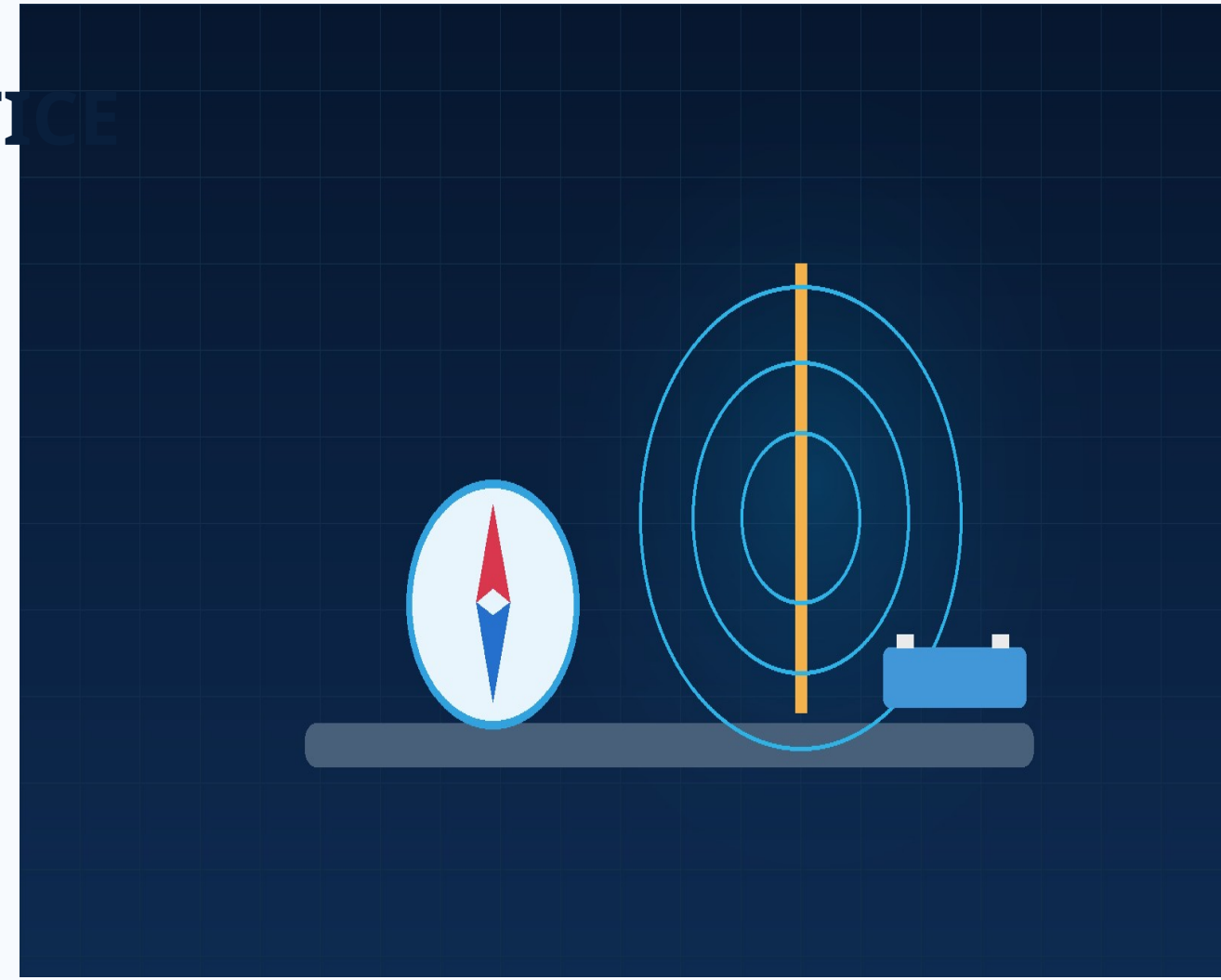
REFLECTION & TRANSFER

- Build a mind map: magnet, current, compass, field lines.
- Complete: “Today I learned…”
- Find a magnetic device at home and explain its role.
- Optional: sketch field lines around a conductor.



WHY THIS IS A GOOD PRACTICE

- Makes an invisible phenomenon visually accessible.
- Combines discussion, demonstration and hands-on learning.
- Uses AI as teacher support—not as a substitute for experimentation.
- Offers inclusive tasks and checks understanding.



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THANK YOU

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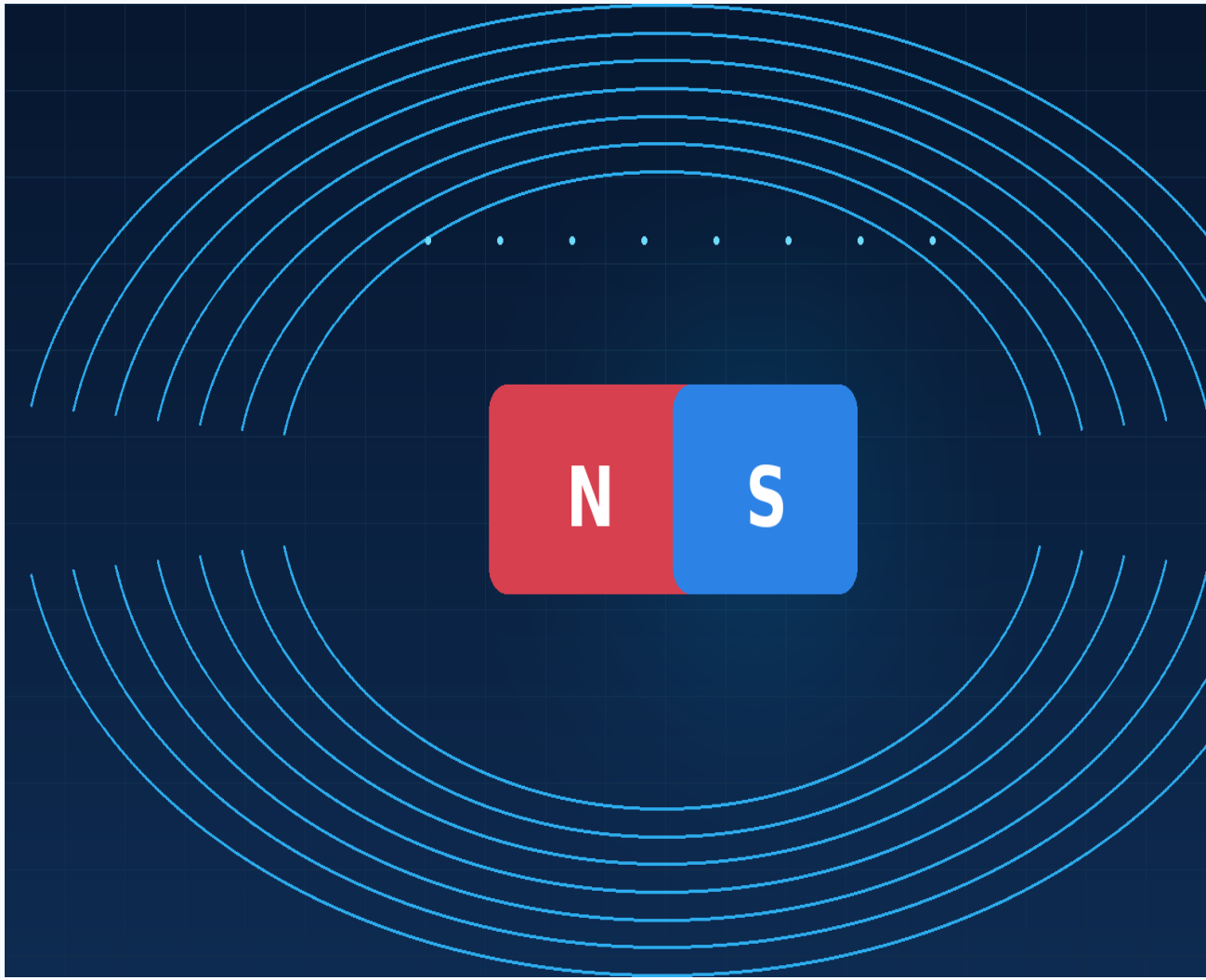
Physics | Magnetic Fields



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GOOD PRACTICE / NORTH MACEDONIA

TIME MANAGEMENT
AI-ENHANCED CLASS TEACHER LESSON

Katerina Dimitrova | SOU “Ljupcho Santov”

30 STUDENTS

45 MINUTES

03 APR 2026

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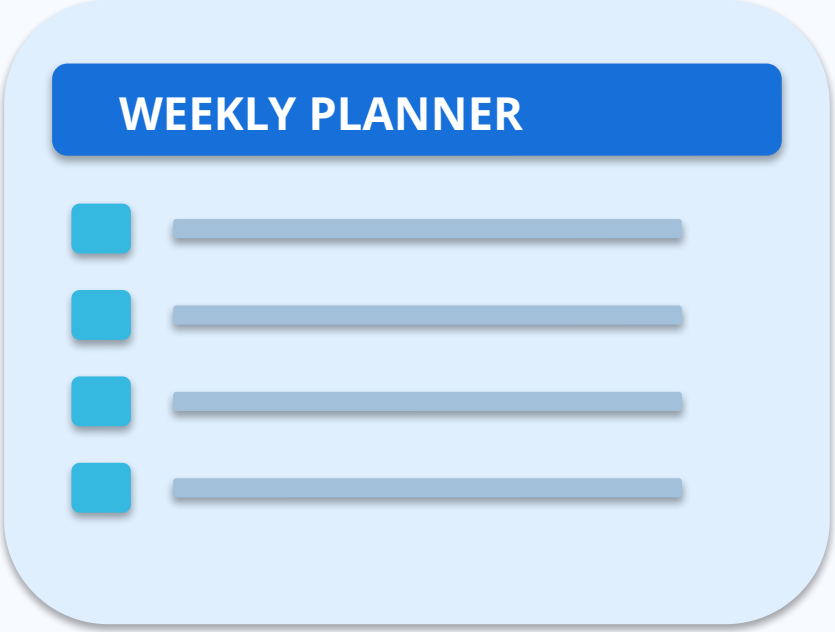
Lesson at a glance

- Secondary education: Grades II–IV
- Class teacher period • 30 students
- 45-minute interactive learning experience
- Life skills, personal development and career readiness



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Why time management matters

- Balance schoolwork and personal responsibilities
- Recognise time-wasting habits
- Plan study, hobbies, rest and social life
- Make realistic decisions under time pressure

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Learning outcomes

UNDERSTAND

Explain effective time management.

IDENTIFY

Recognise habits that waste time.

APPLY

Create a personal plan and collaborate.

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45-minute lesson journey

05 min
Welcome

08 min
Race Against Time

07 min
Brainstorm

10 min
Weekly schedule

10 min
Challenges

03 min
AI demo

02 min
Reflection

GOOD PRACTICE / NORTH MACEDONIA

Warm-up: Race Against Time

- Teams receive a short puzzle or task
- Only two minutes to complete the challenge
- Discuss pressure, priorities and planning
- Connect the game to everyday school life

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Brainstorm: Where does our time go?

- Students identify daily activities
- Use sticky notes to visualise time use
- Classify productive and non-productive habits
- Discuss choices without judging individuals

01

STUDY

02

REST

03

HOBBIES

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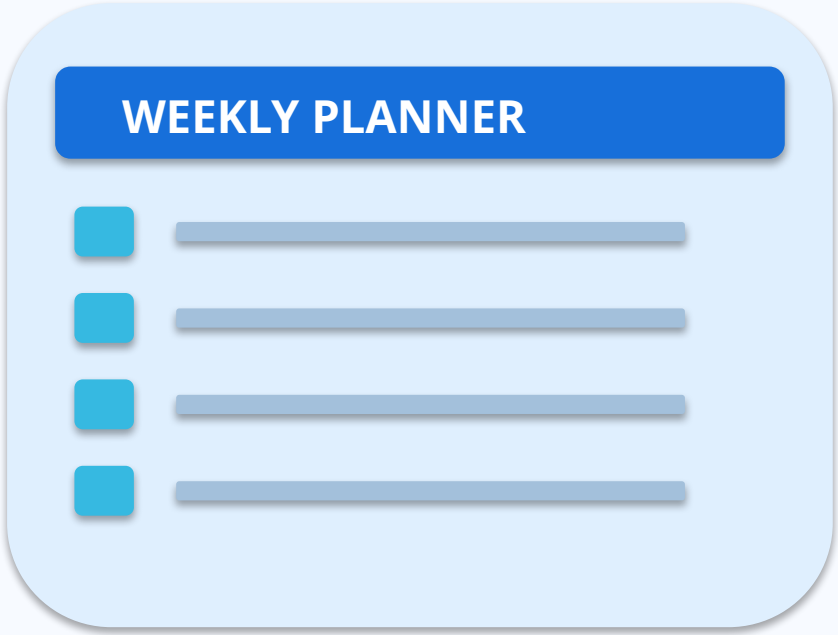
Group challenge: Build the perfect schedule

- Design an ideal weekly student timetable
- Balance learning, hobbies, rest and social life
- Present the plan and explain key decisions
- Compare different approaches as a class



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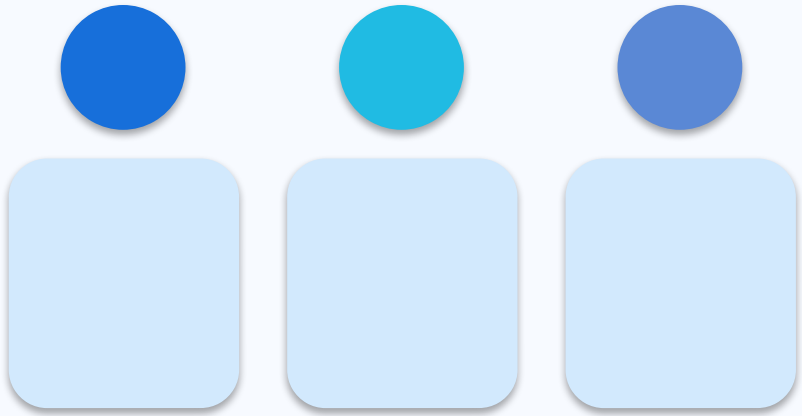
Problem-solving with real-life scenarios

- Groups receive competing deadlines and tasks
- Agree on priorities and realistic solutions
- Present decisions and discuss alternatives
- Develop teamwork and organisational skills



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AI integration: practical planning support

ChatGPT

Study schedules and productivity tips

Microsoft Copilot

Organisation and planning support

Canva AI

Visual weekly planner templates

Teacher-guided demonstration • 3 minutes

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Example AI prompt

"Create a realistic weekly study schedule for a secondary school student. Include homework, exam preparation, hobbies, rest and social time. Suggest three practical ways to avoid procrastination."

Illustrative prompt based on the AI-assisted activity in the lesson plan.

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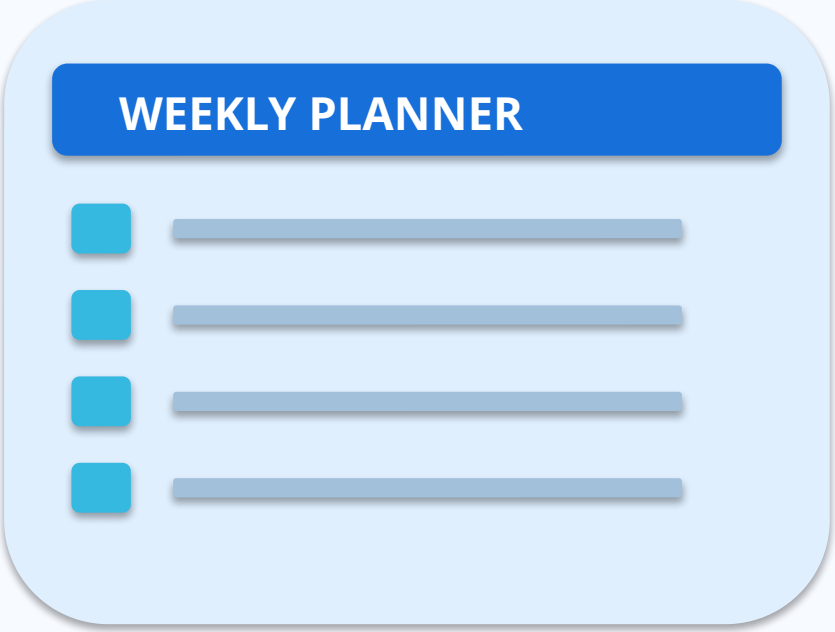
Reflection and evaluation

- Students identify one useful strategy
- Write one habit to practise next week
- Share reflections with classmates
- Use the personal plan as a practical takeaway



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Why this is a transferable good practice

- Simple to adapt across subjects and age groups
- Combines active learning with peer collaboration
- Connects AI tools to real organisational needs
- Keeps human judgement central to planning

AI

PLAN • ORGANISE • REFLECT

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THANK YOU

Katerina Dimitrova

SOU “Ljupcho Santov” • North Macedonia

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AI-ENHANCED HOSPITALITY EDUCATION

TEACHER

Kire Krusharovski

SCHOOL

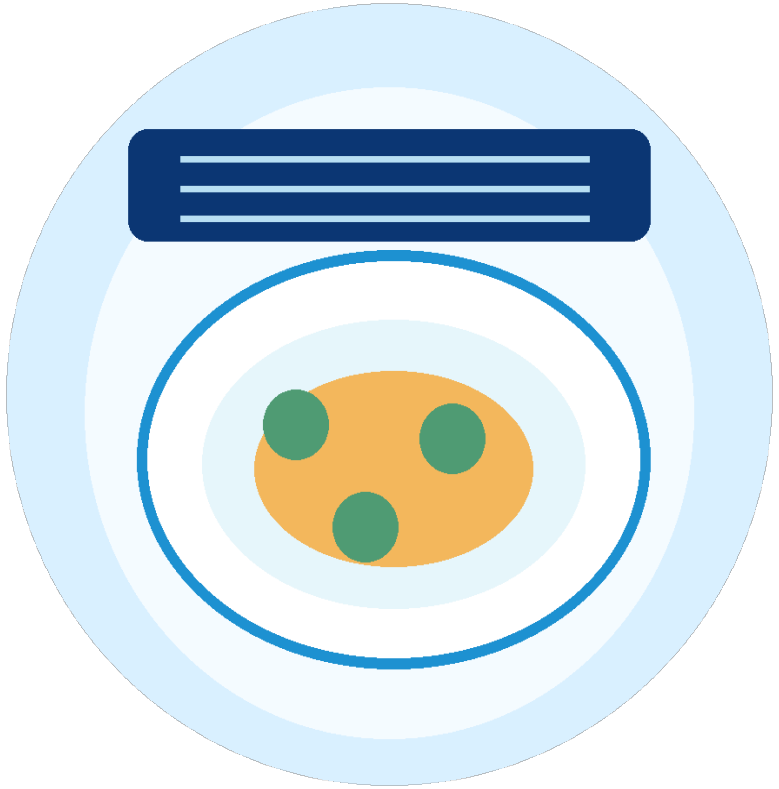
Lazar Tanev Secondary School, Skopje

PILOT LESSONS

Five 45-minute lessons • Grade III • Ages 16–17

LESSON 1 | 16 DECEMBER 2025

Restaurant Food Lists



LEARNING GOAL

Create a professional restaurant food list with clear categories and descriptions.

AI INTEGRATION

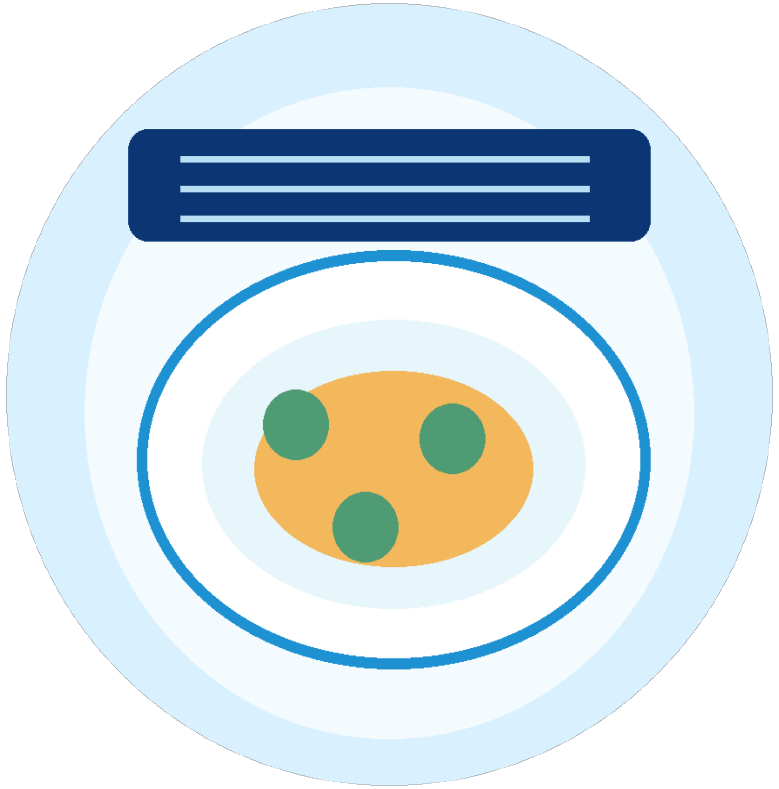
ChatGPT / Microsoft Copilot for descriptions; Canva for layout and visuals.

STUDENT ACTIVITY

Teams build a digital food list, checking accuracy against the textbook.

AI-SUPPORTED TEACHING EXAMPLE

Restaurant Food Lists — Practice & Evidence



SAMPLE PROMPT

“Create a restaurant food list with clear categories and short dish descriptions.”

ASSESSMENT

Review category order, terminology, clarity and visual presentation; short Kahoot quiz.

TEACHER REFLECTION

AI supported motivation, faster visualisation and practical application of theory.

LESSON 2 | 23 DECEMBER 2025

Types and Composition of Menus

LEARNING GOAL

Distinguish a food list from a menu; create à la carte and table d'hôte menus.

AI INTEGRATION

Copilot proposes menus for different guest profiles; Canva supports professional design.

STUDENT ACTIVITY

Adapt menus for athletes or vegetarian guests and justify the choices.

AI-SUPPORTED TEACHING EXAMPLE

Types and Composition of Menus — Practice & Evidence

SAMPLE PROMPT

“Create a balanced table d’hôte menu for vegetarian guests.”

ASSESSMENT

Oral checks, menu analysis and group presentations on sequence and suitability.

TEACHER REFLECTION

Students practised critical thinking and adapting menus to guest needs.

LESSON 3 | 30 DECEMBER 2025

Aperitifs and Digestifs

LEARNING GOAL

Classify aperitifs and digestifs and explain their role in meal service.

AI INTEGRATION

Kahoot AI Generator creates quizzes; Copilot supplies examples and contextual facts.

STUDENT ACTIVITY

Classify beverages, discuss quiz answers and decide appropriate serving stages.

AI-SUPPORTED TEACHING EXAMPLE

Aperitifs and Digestifs — Practice & Evidence

SAMPLE PROMPT

“Create 10 Kahoot questions about aperitifs and digestifs.”

ASSESSMENT

Kahoot results, questioning and discussion of correct classifications.

TEACHER REFLECTION

Gamification and AI increased interaction and supported applied learning.

LESSON 4 | 20 JANUARY 2026

The Wine Service Process

LEARNING GOAL

Explain professional wine service and food pairings; practise guest communication.

AI INTEGRATION

Copilot supports food-pairing and temperature suggestions; Gamma creates wine-region visuals.

STUDENT ACTIVITY

Demonstrate presentation, opening and decanting; simulate guest interactions.

AI-SUPPORTED TEACHING EXAMPLE

The Wine Service Process — Practice & Evidence

SAMPLE PROMPT

“Suggest wine and food pairings for a restaurant service lesson.”

ASSESSMENT

Observe practical service procedures and discuss appropriate recommendations.

TEACHING FOCUS

AI suggestions are reviewed through professional hospitality knowledge.

LESSON 5 | GRADE III / 45 MINUTES

Bar Mixes and Preparation Methods

LEARNING GOAL

Explore bar mixes and preparation methods in vocational hospitality education.

AI INTEGRATION

Digital support integrated into the lesson planning approach.

STUDENT ACTIVITY

Use the original lesson plan for the precise activity and assessment sequence.

AI-SUPPORTED TEACHING EXAMPLE

Bar Mixes and Preparation Methods — Practice & Evidence

DOCUMENTATION

The fifth lesson is included in the teacher's submitted lesson-plan collection.

EVIDENCE

The original plan provides the detailed prompts, activities and teacher reflection.

SHARING

This slide is a summary; consult the original for the complete methodology.

PILOT TEACHING EXPERIENCE

KEY TAKEAWAYS

RELEVANT AI USE

AI supports planning, examples, visual design and formative assessment.

TEACHER OVERSIGHT

Students verify generated information against professional materials.

TRANSFERABILITY

The approach can be adapted across hospitality and vocational subjects.

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THANK YOU

PROJECT

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REFERENCE

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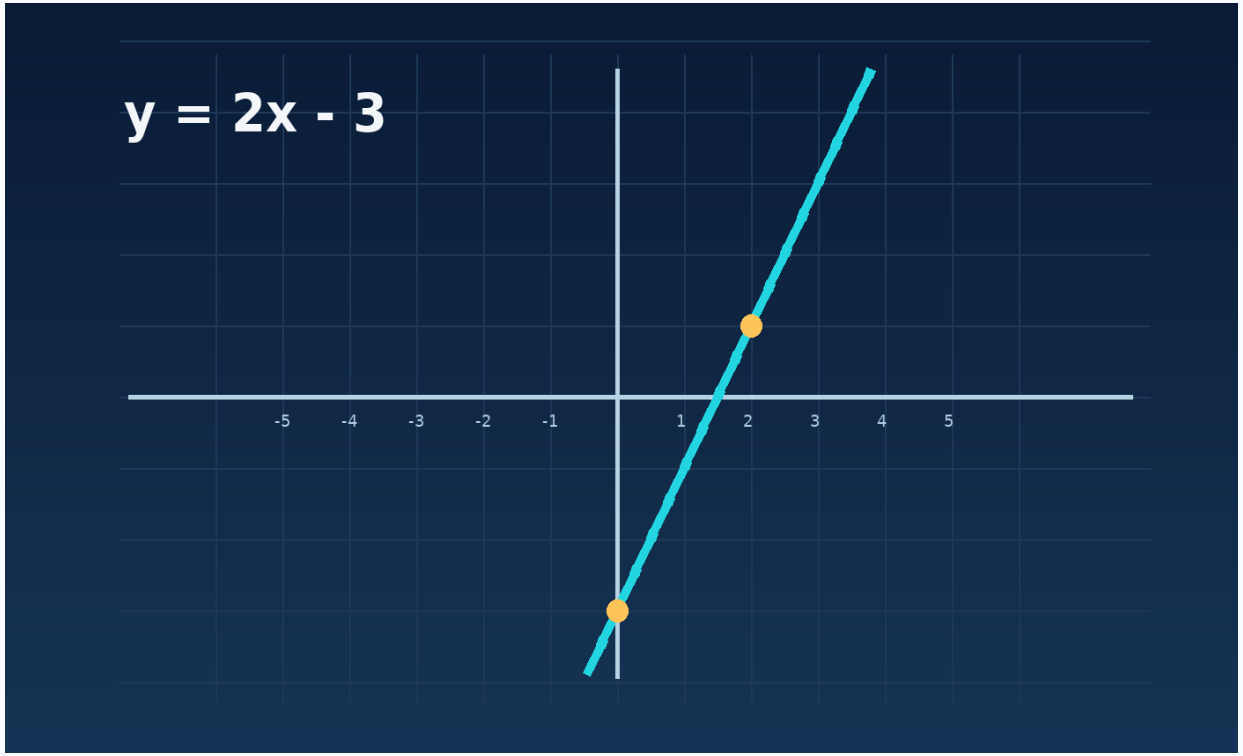
LINEAR FUNCTIONS, EQUATIONS & INEQUALITIES

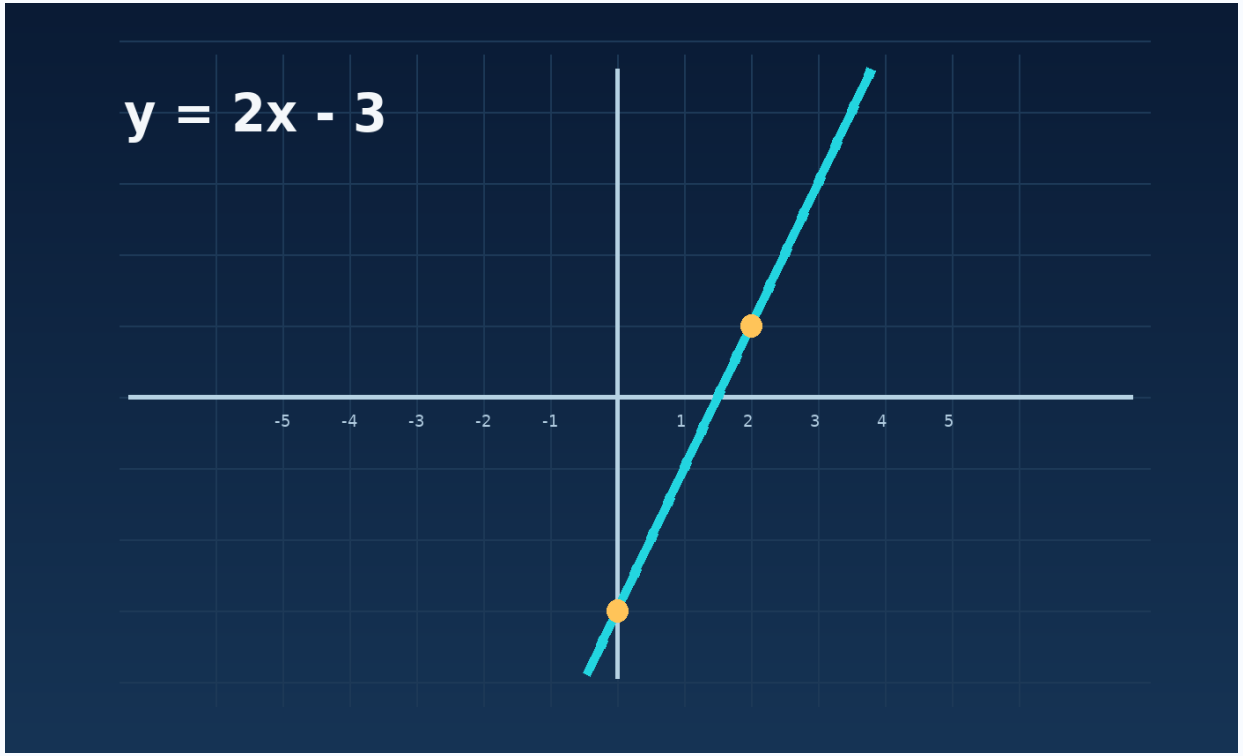
AI-enhanced mathematics review

High school • 45-minute lesson
Shared anonymously with teacher permission



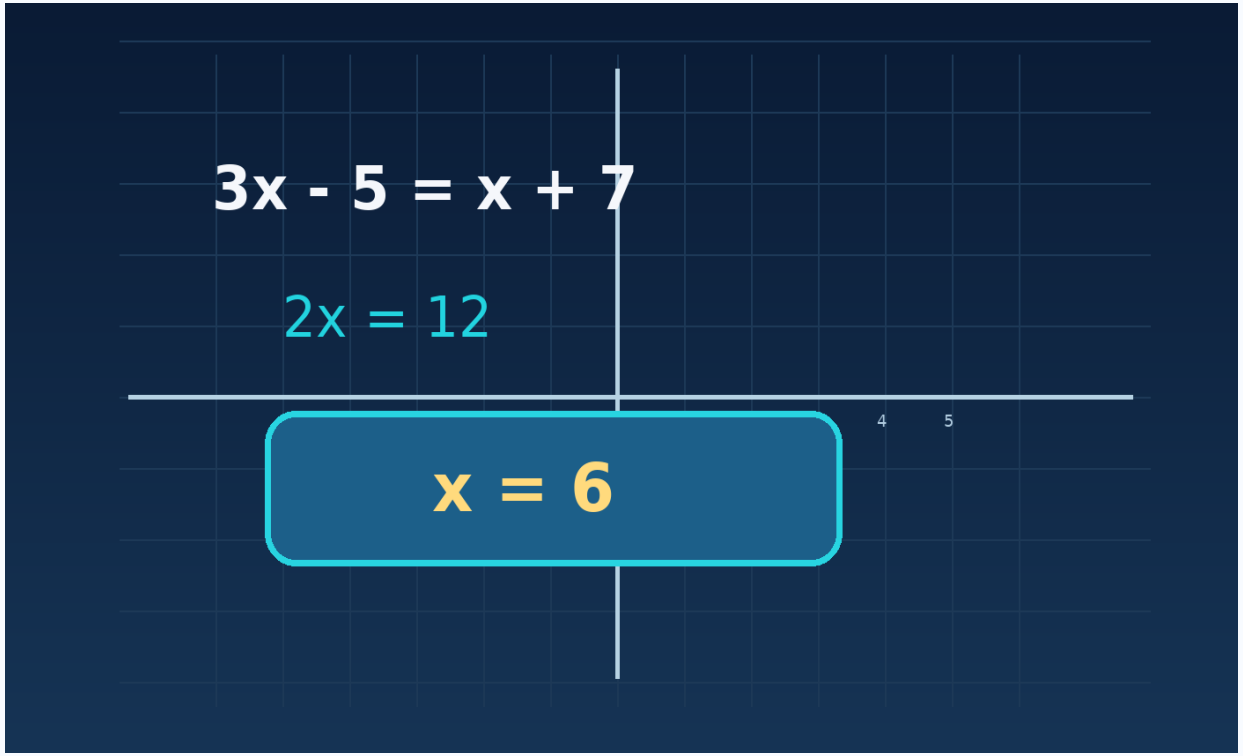
ONE TOPIC. THREE CORE IDEAS.

- Linear functions: rules, slope and intercept.
- Linear equations: find the unknown value.
- Linear inequalities: describe solution sets.
- Connect symbolic and graphical thinking.



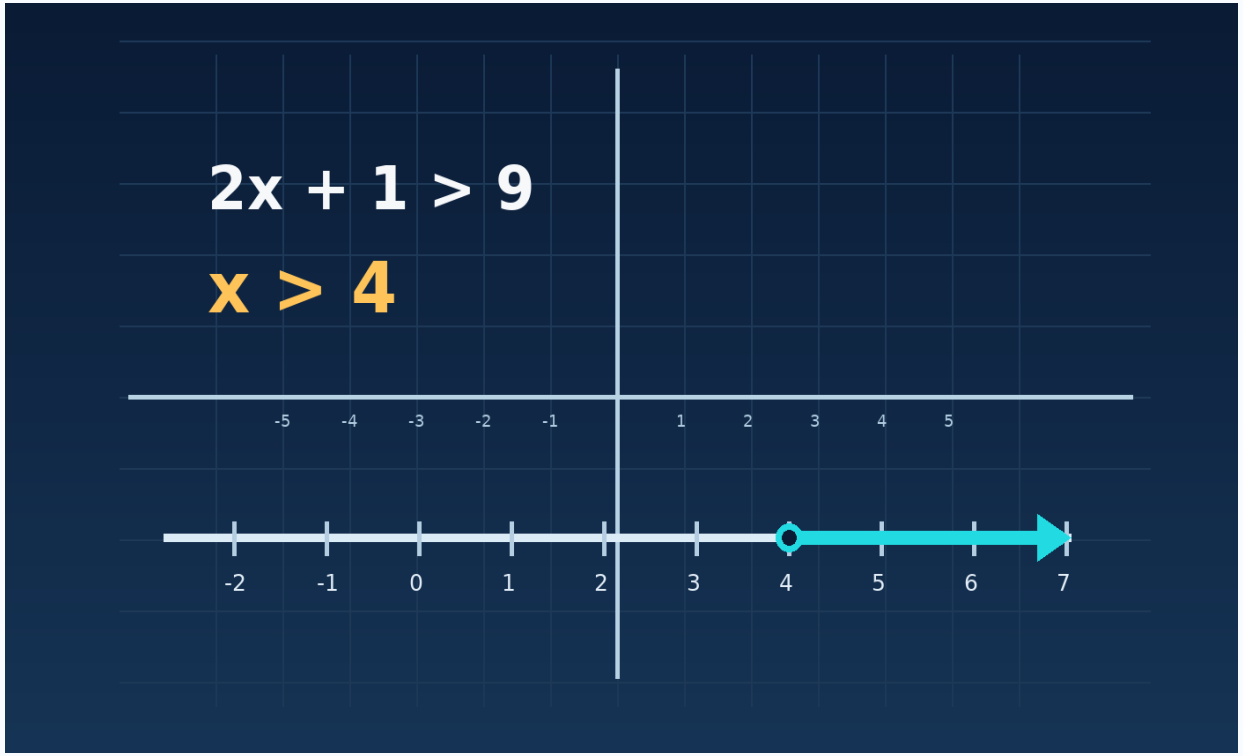
LEARNING OBJECTIVES

- Recall key definitions and procedures.
- Interpret slope and intercept on graphs.
- Solve equations and inequalities accurately.
- Explain solutions and correct misconceptions.



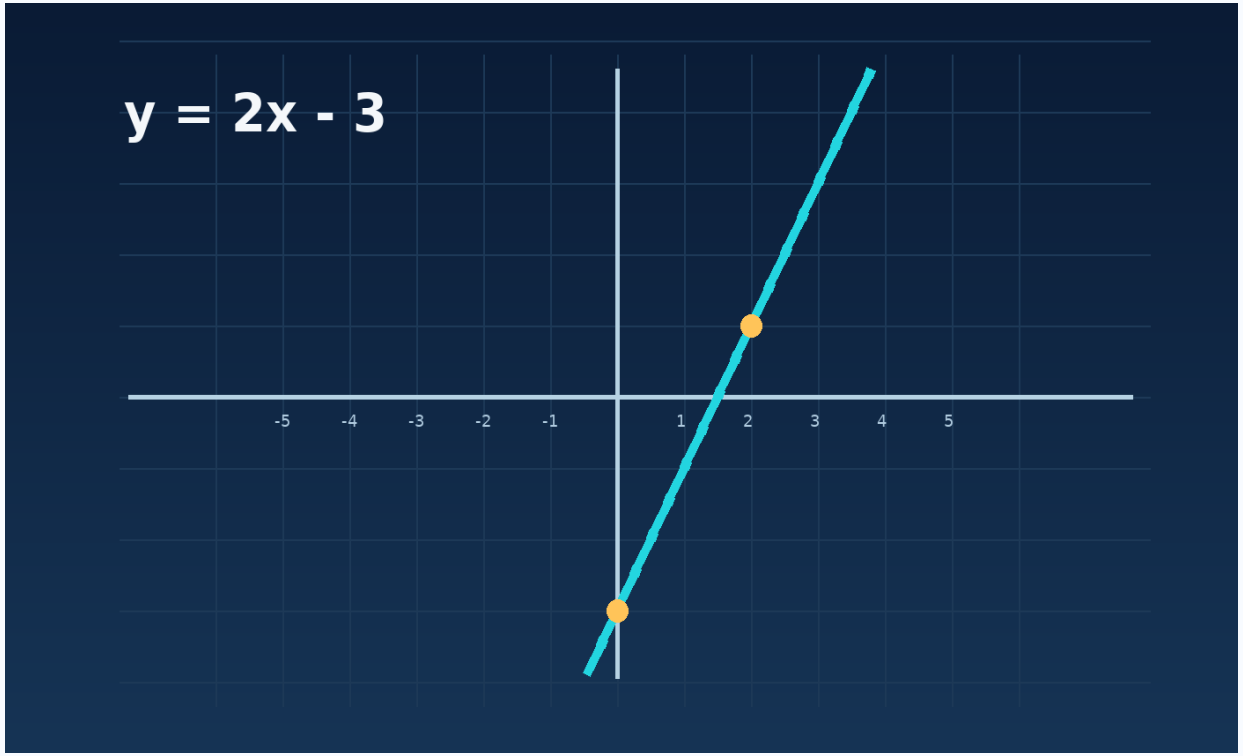
WARM-UP: CLASSIFY IT

- Check homework and clarify difficulties.
- What is a linear function?
- How do we solve a linear equation?
- How is an inequality solution represented?



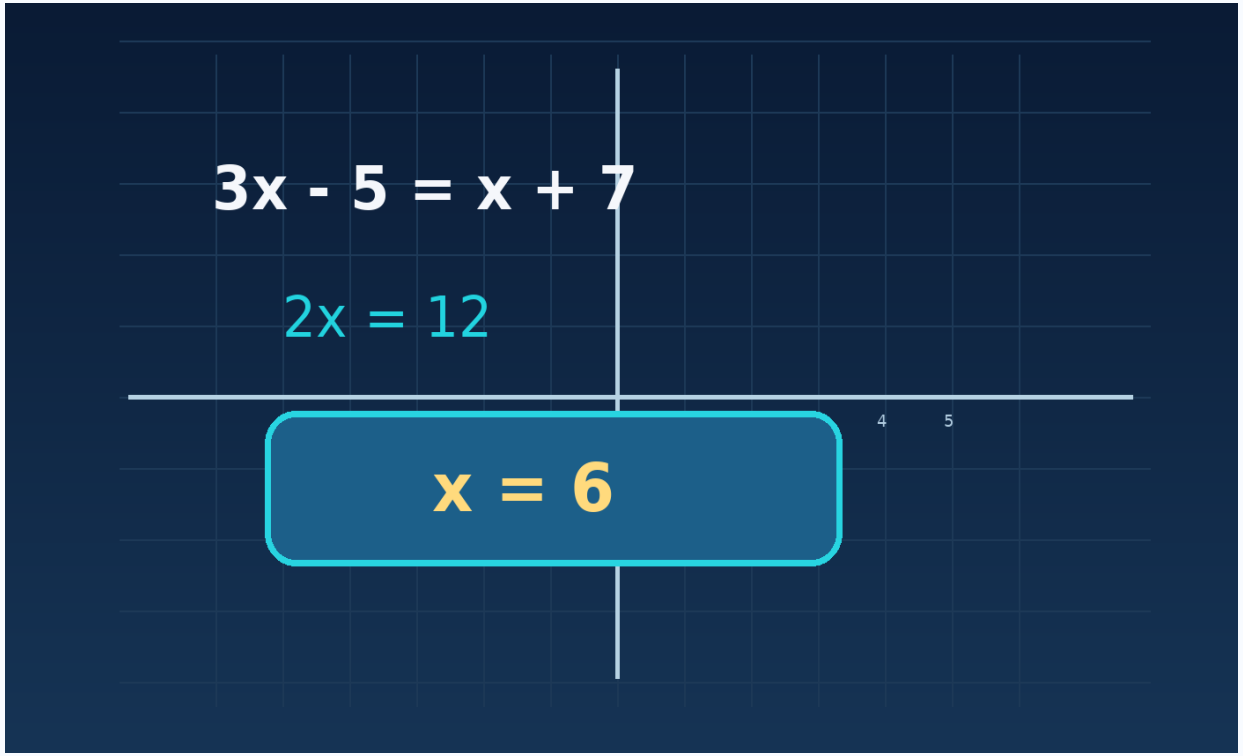
FUNCTION EXAMPLE: y = 2x – 3

- Slope: 2.
- Y-intercept: –3.
- At x = 4, y = 5.
- Discuss how the graph reflects the formula.



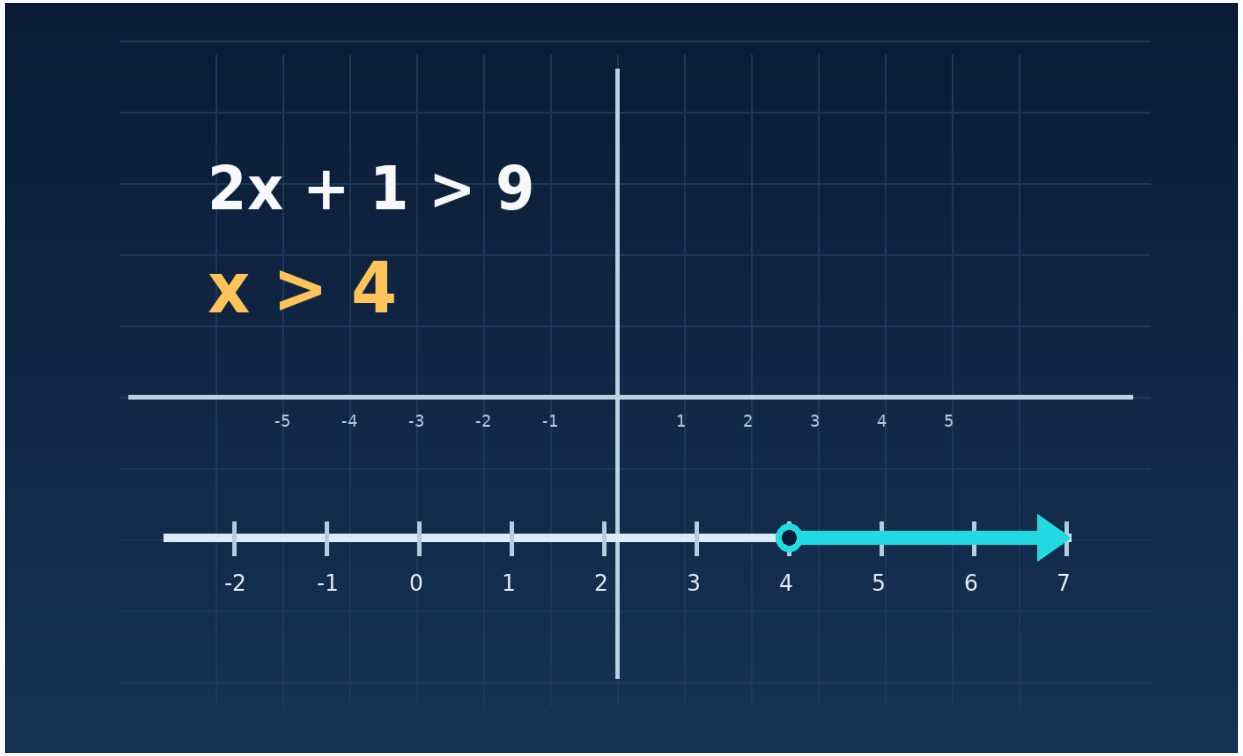
EQUATION EXAMPLE

- Solve: 3x − 5 = x + 7.
- Subtract x and add 5.
- 2x = 12, so x = 6.
- Check by substitution.



INEQUALITY & NUMBER LINE

- Solve: 2x + 1 > 9.
- Subtract 1, then divide by 2.
- Result: x > 4.
- Use an open circle and arrow to the right.

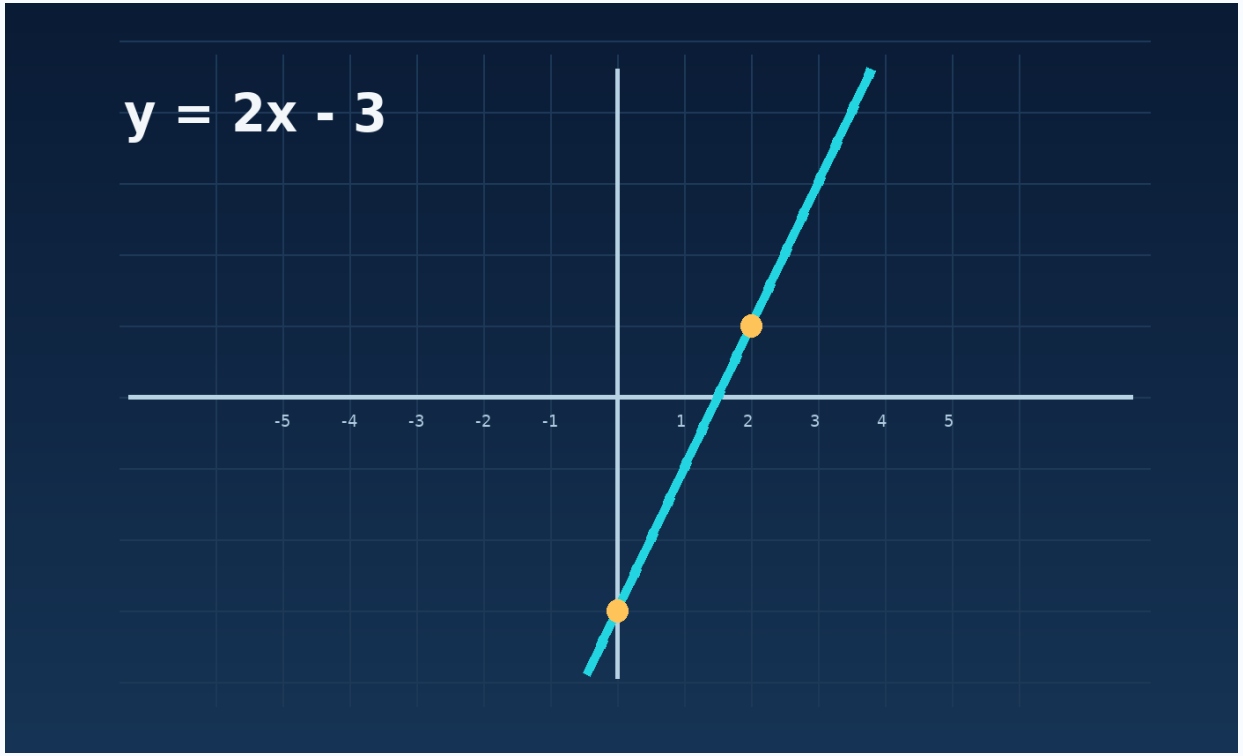


REAL-WORLD APPLICATION

- Taxi base fare: 50 denars.
- Distance rate: 30 denars per kilometre.
- Model: C(x) = 50 + 30x.
- Six kilometres cost 230 denars.

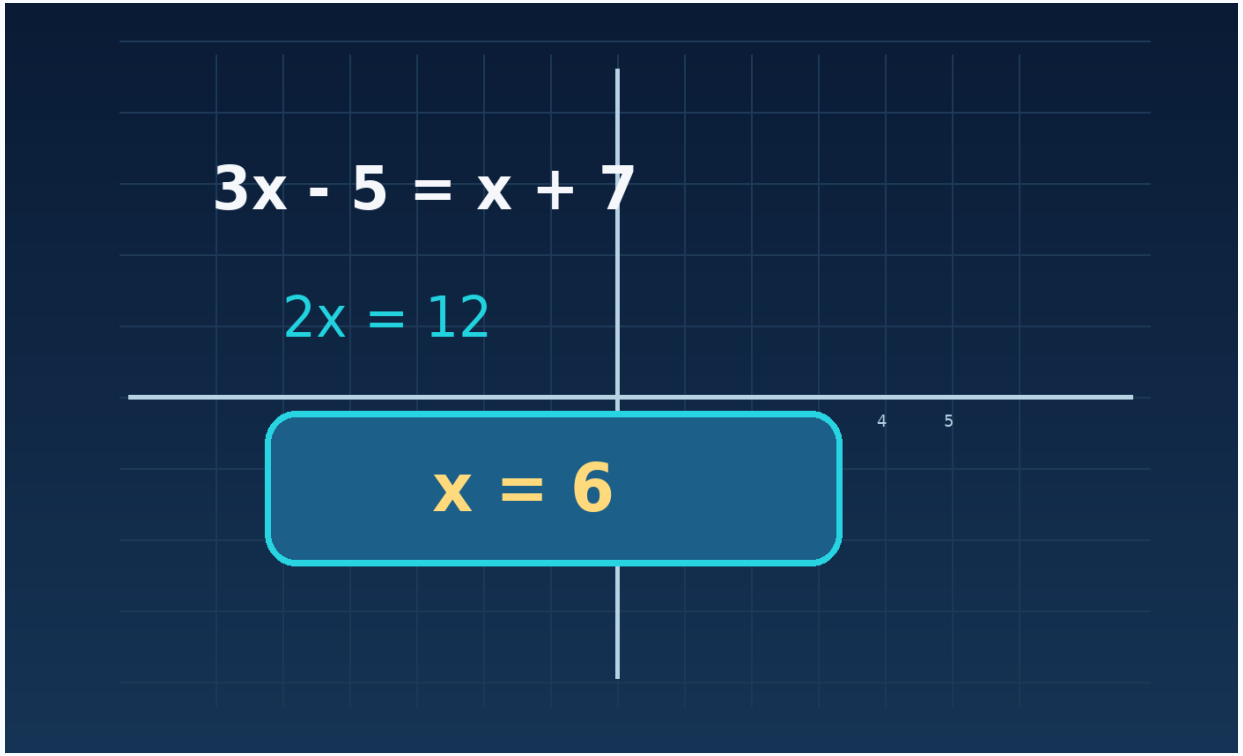
PRACTICE: TEXTBOOK REVIEW

- Pages 165–166: odd tasks 11–33.
- Students first work independently.
- Pairs compare methods and spot mistakes.
- Teacher leads discussion of selected solutions.



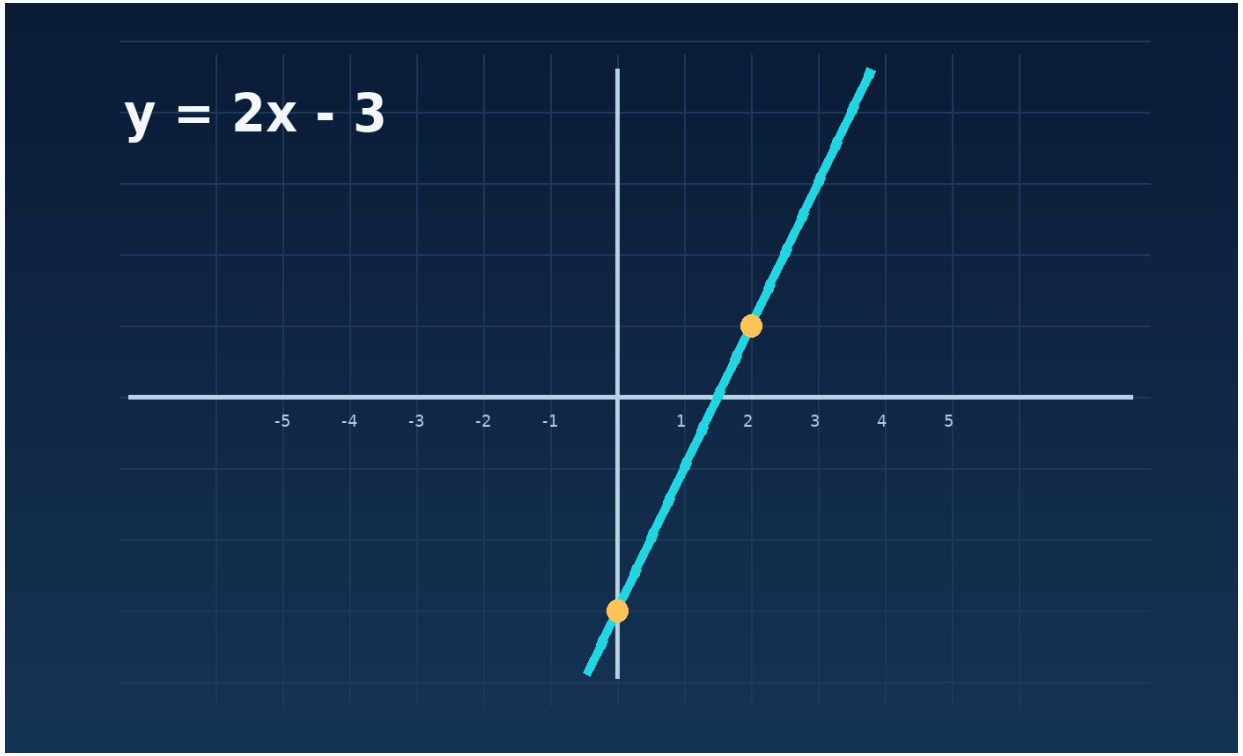
DIFFERENTIATION FOR EVERY LEARNER

- Support: formula reminders and partial steps.
- Core: solve and explain standard tasks.
- Extension: create new questions for peers.
- Peer learning: compare and correct answers.



HOW AI SUPPORTED THE LESSON

- ChatGPT / Microsoft Copilot for warm-up prompts.
- Additional examples and practice questions.
- Differentiated exercises and exit tickets.
- Teacher selects and verifies every example.

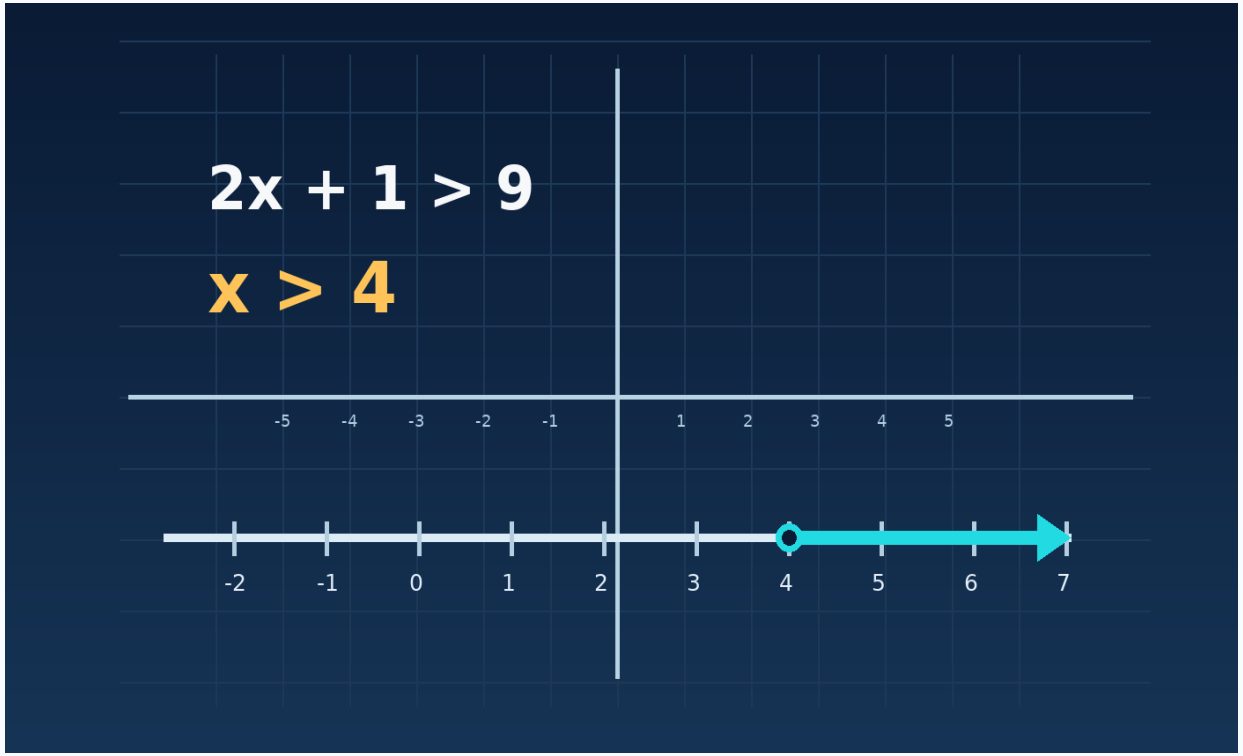


EXAMPLE AI PROMPT

“Generate review activities and practice examples for linear functions, linear equations and linear inequalities for high school students.”

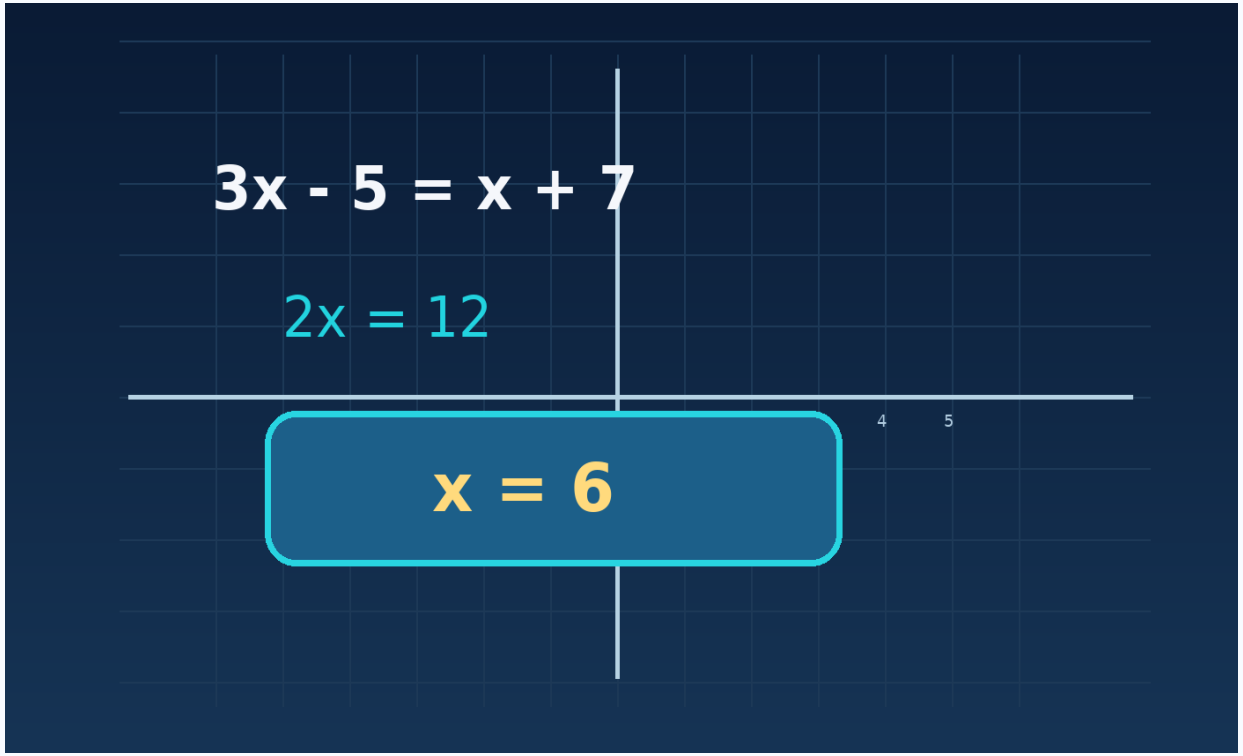
FORMATIVE ASSESSMENT

- Observe discussion and student work.
- Check selected textbook solutions.
- Exit ticket: one equation and inequality.
- Identify the slope of one linear function.



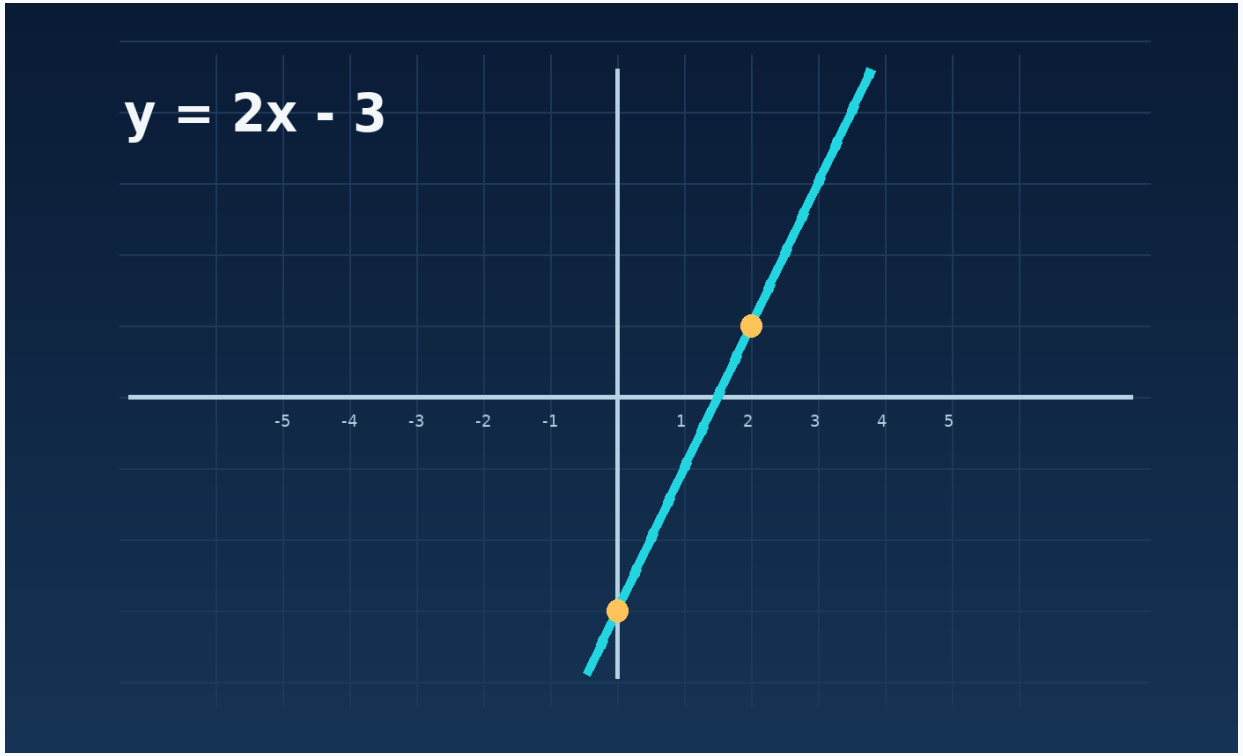
COMMON MISTAKES TO ADDRESS

- Sign errors during rearrangement.
- Incorrect transformations of equations.
- Wrong inequality direction.
- Misreading information from a graph.



WHY THIS IS A GOOD PRACTICE

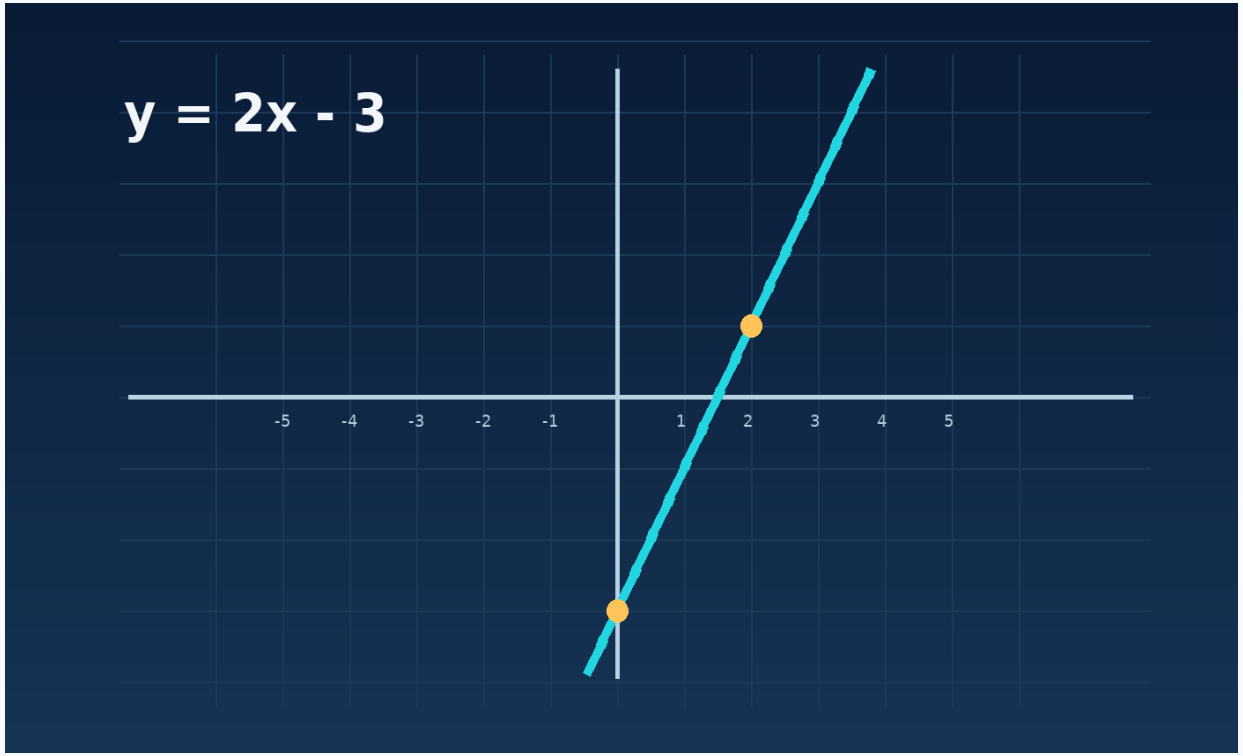
- Combines conceptual and procedural review.
- Links algebra to graphs and real life.
- Uses AI for adaptable teacher-made resources.
- Promotes peer explanation and reflection.



THANK YOU

Mathematics • Linear Functions, Equations & Inequalities

High school • North Macedonia



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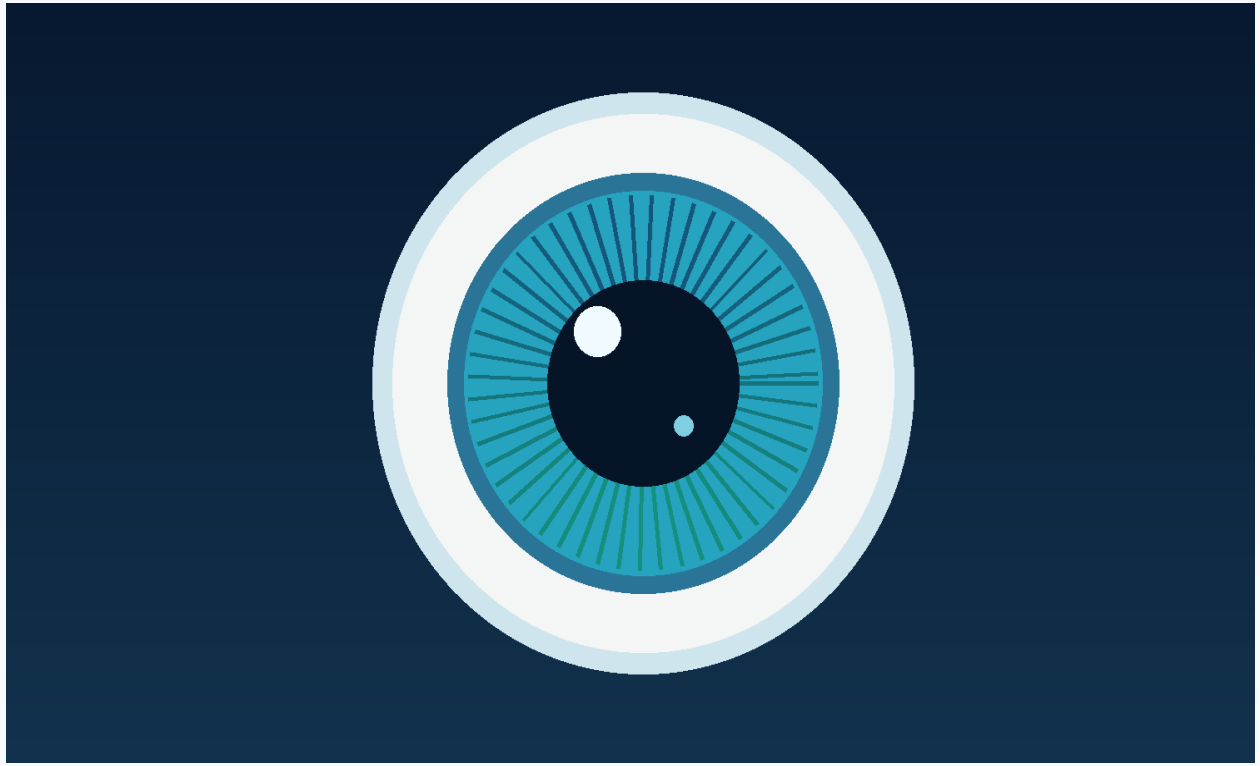
AI NAVIGATORS / GOOD PRACTICE

ANATOMY & PHYSIOLOGY OF THE HUMAN EYE

Marina Atanaskoska

SUGS “Marija Kiri-Sklodovska” • Skopje

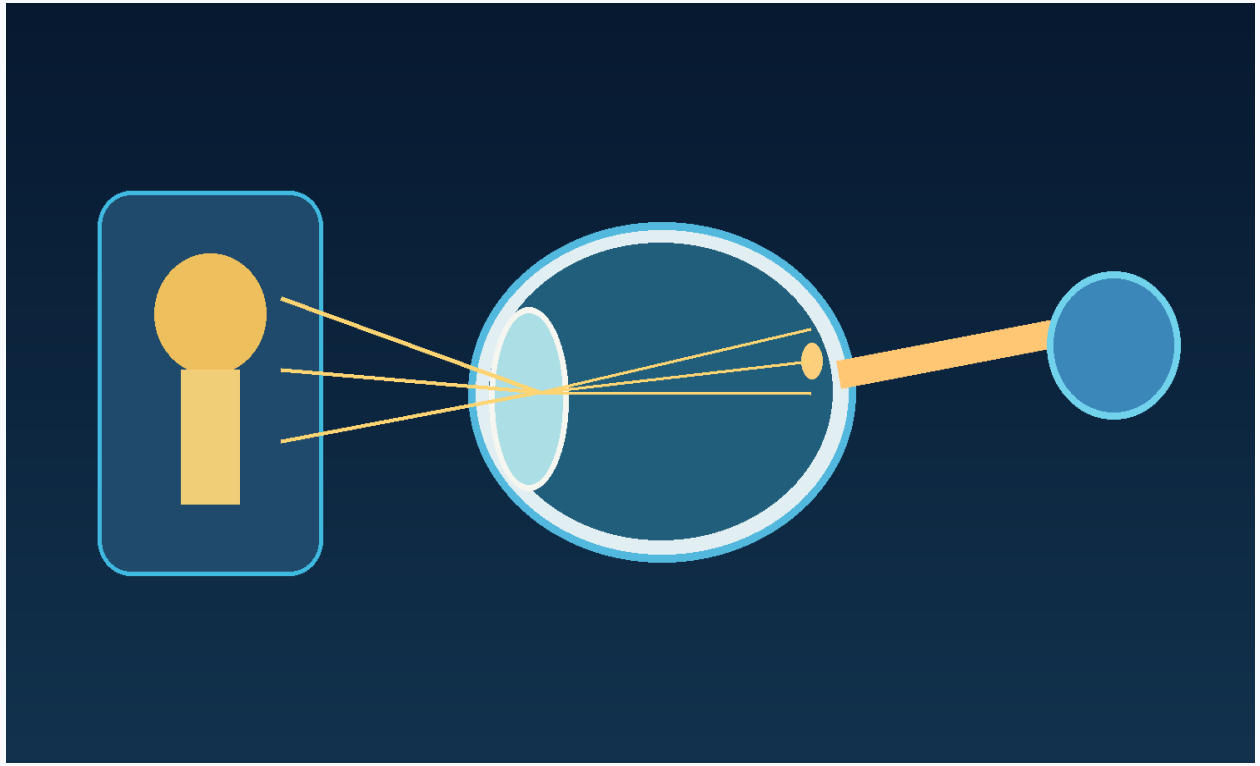
Secondary medical school | Ages 15–16 | 45 minutes



AI NAVIGATORS / GOOD PRACTICE

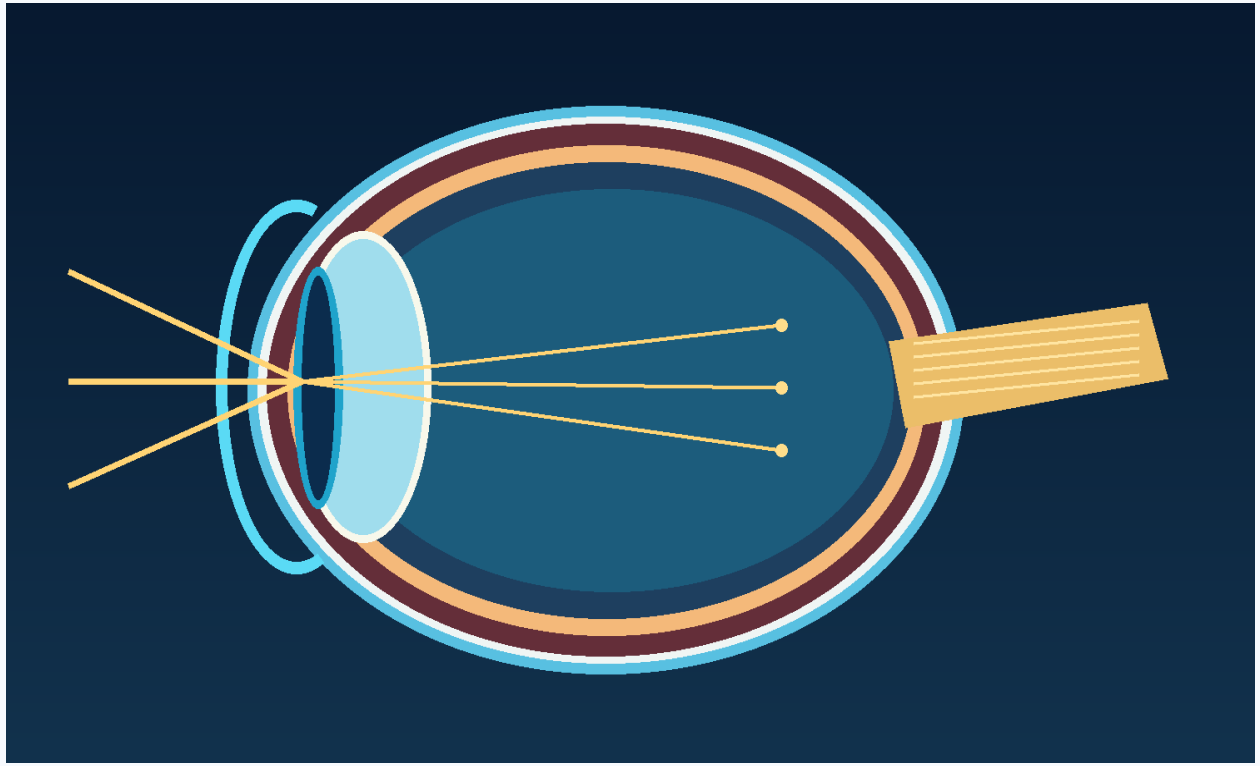
WHY THIS LESSON MATTERS

- Vision connects anatomy with daily life.
- Medical students need accurate terminology.
- Visual models make internal structures easier to understand.
- Active practice supports retention.



LEARNING OBJECTIVES

- Identify the main anatomical parts of the eye.
- Explain the function of each structure.
- Connect anatomy with the process of vision.
- Use appropriate medical terminology.

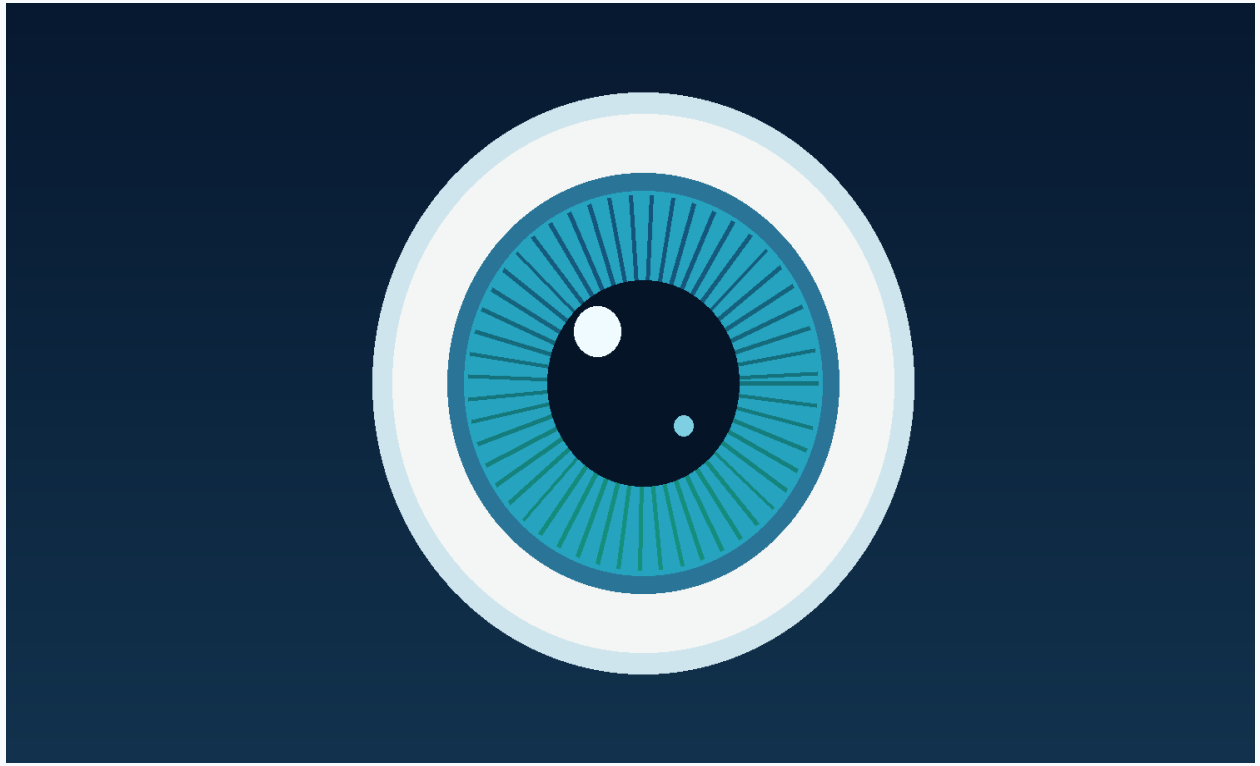


AI NAVIGATORS / GOOD PRACTICE

ENGAGING WARM-UP / 5 MIN

How does the human eye work?

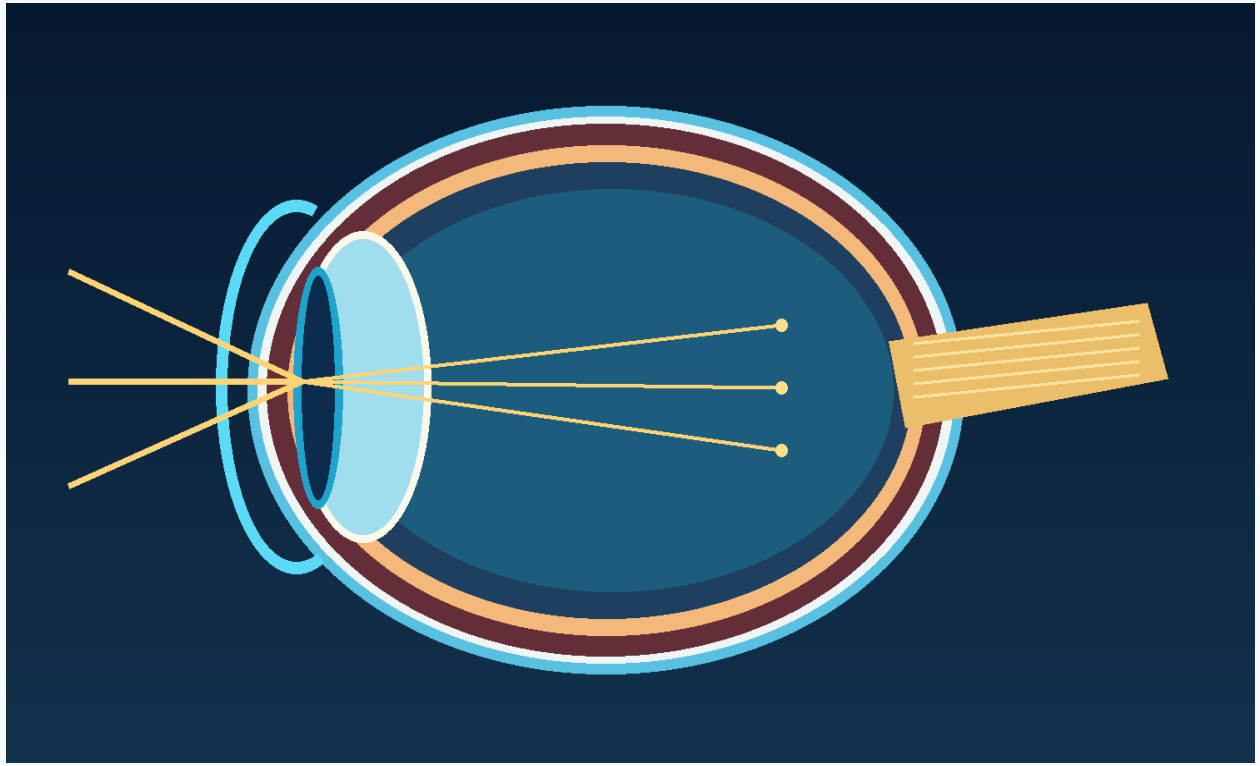
- Watch a short introductory video.
- Which part controls the amount of light?
- Why is vision important in everyday life?
- Discuss responses as a class.



AI NAVIGATORS / GOOD PRACTICE

INSIDE THE EYE

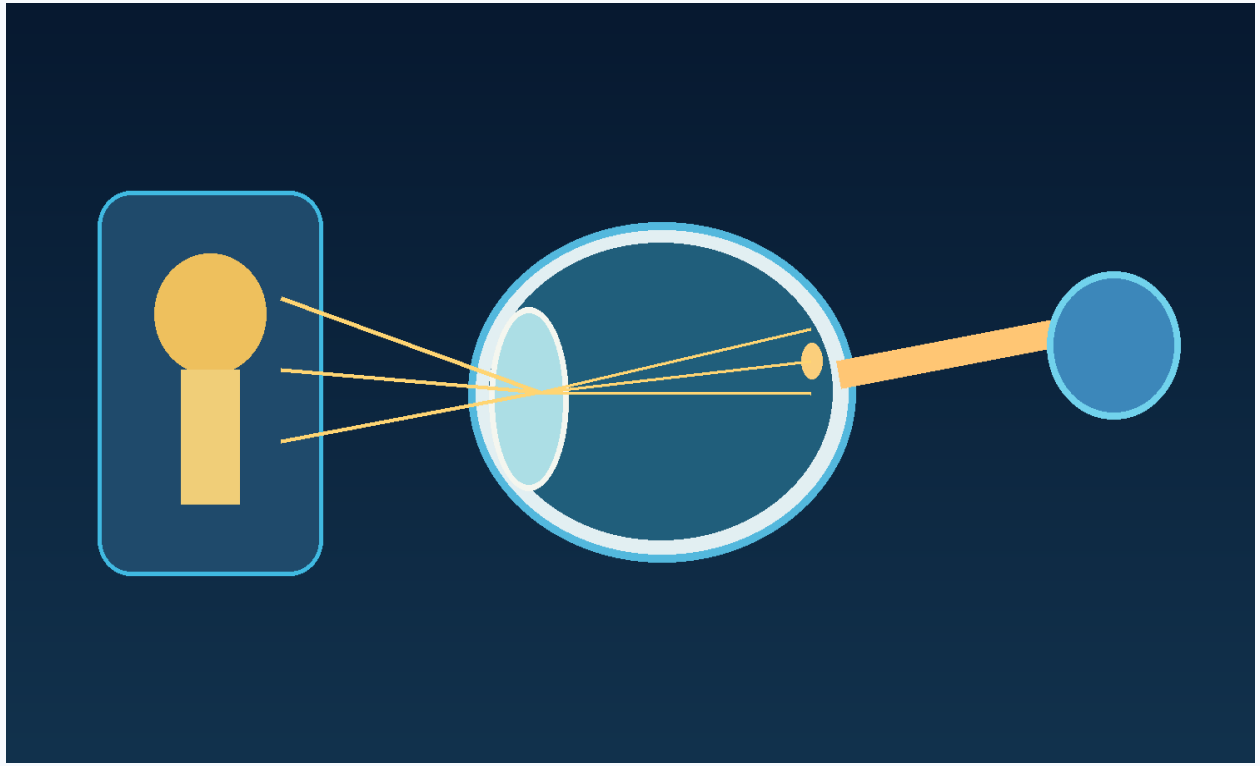
- Cornea: refracts incoming light.
- Iris and pupil: regulate light entry.
- Lens: focuses light on the retina.
- Retina: detects light.
- Optic nerve: carries visual signals.



AI NAVIGATORS / GOOD PRACTICE

HOW VISION OCCURS

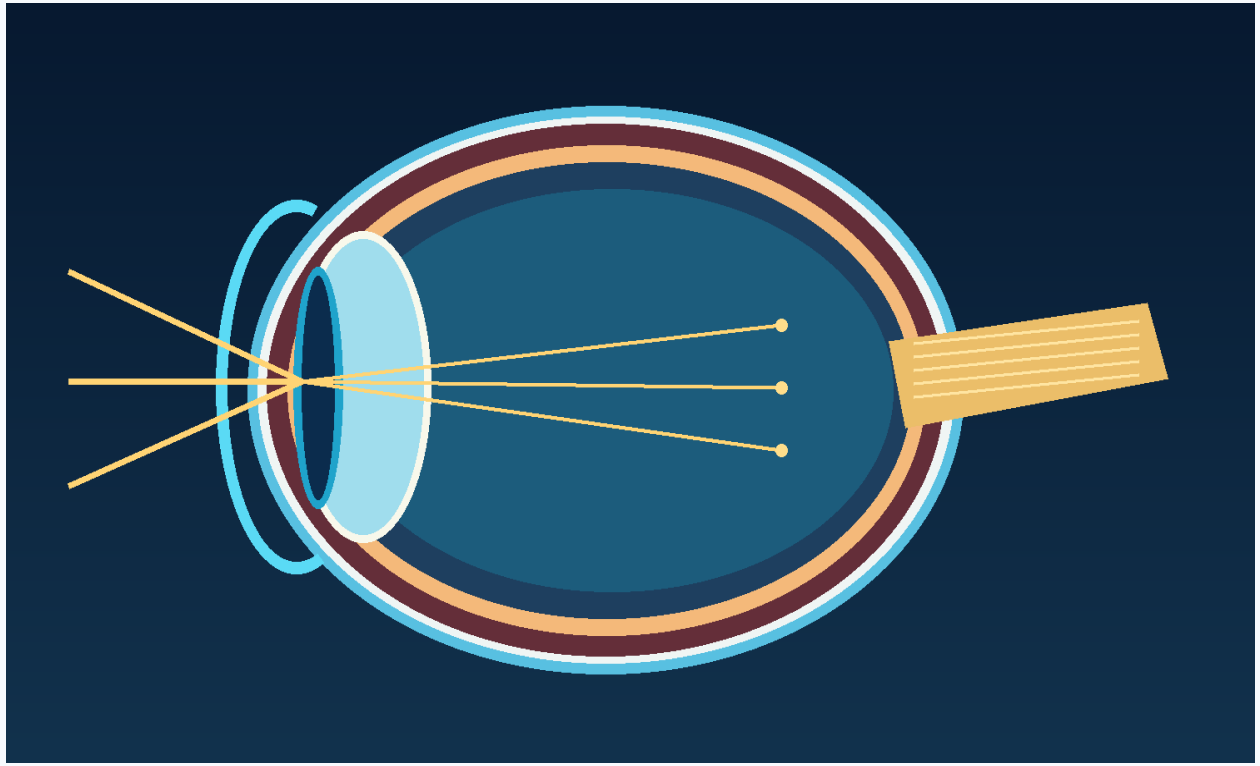
- Light enters through the cornea and pupil.
- The lens focuses light on the retina.
- Retinal photoreceptors respond to light.
- The optic nerve carries signals to the brain.



AI NAVIGATORS / GOOD PRACTICE

MAIN TEACHING ACTIVITY / 20 MIN

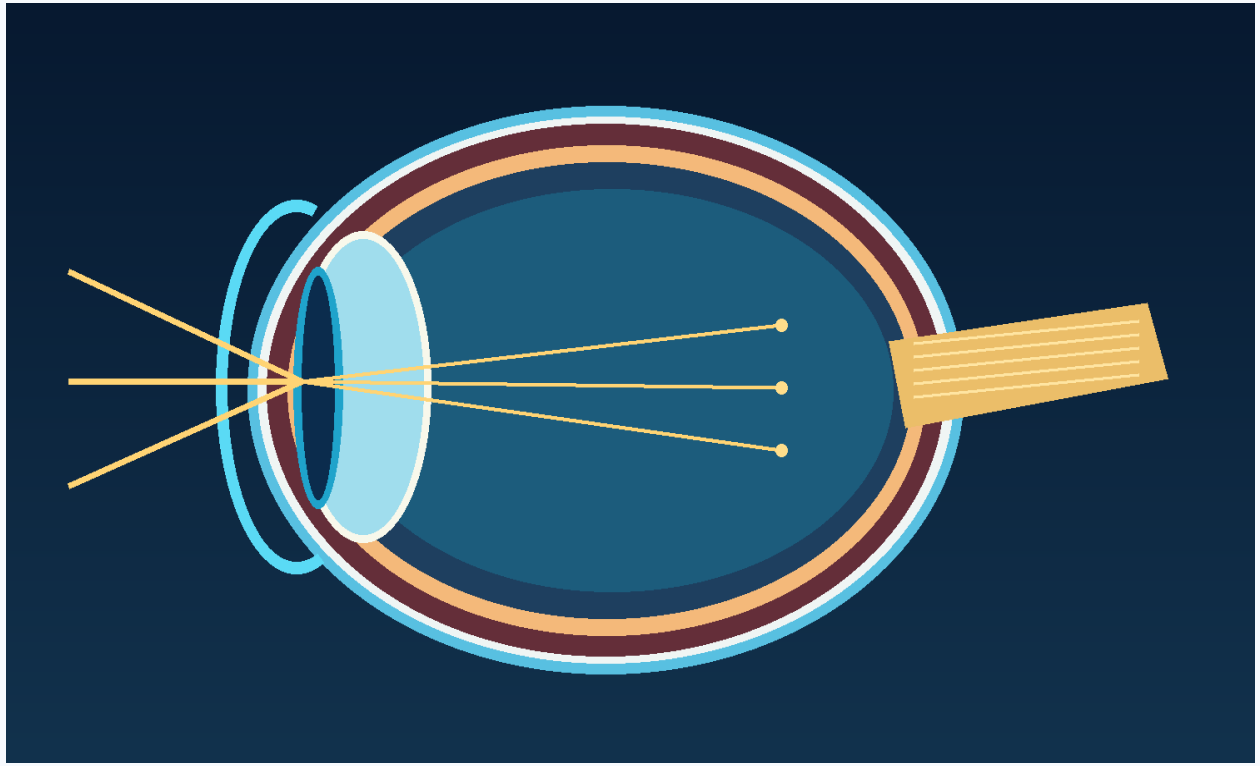
- Explain structures using a PowerPoint presentation.
- Locate external and internal parts on diagrams.
- Compare anatomical models with illustrations.
- Use short questions throughout the explanation.



AI NAVIGATORS / GOOD PRACTICE

PAIR ACTIVITY / LABEL THE EYE

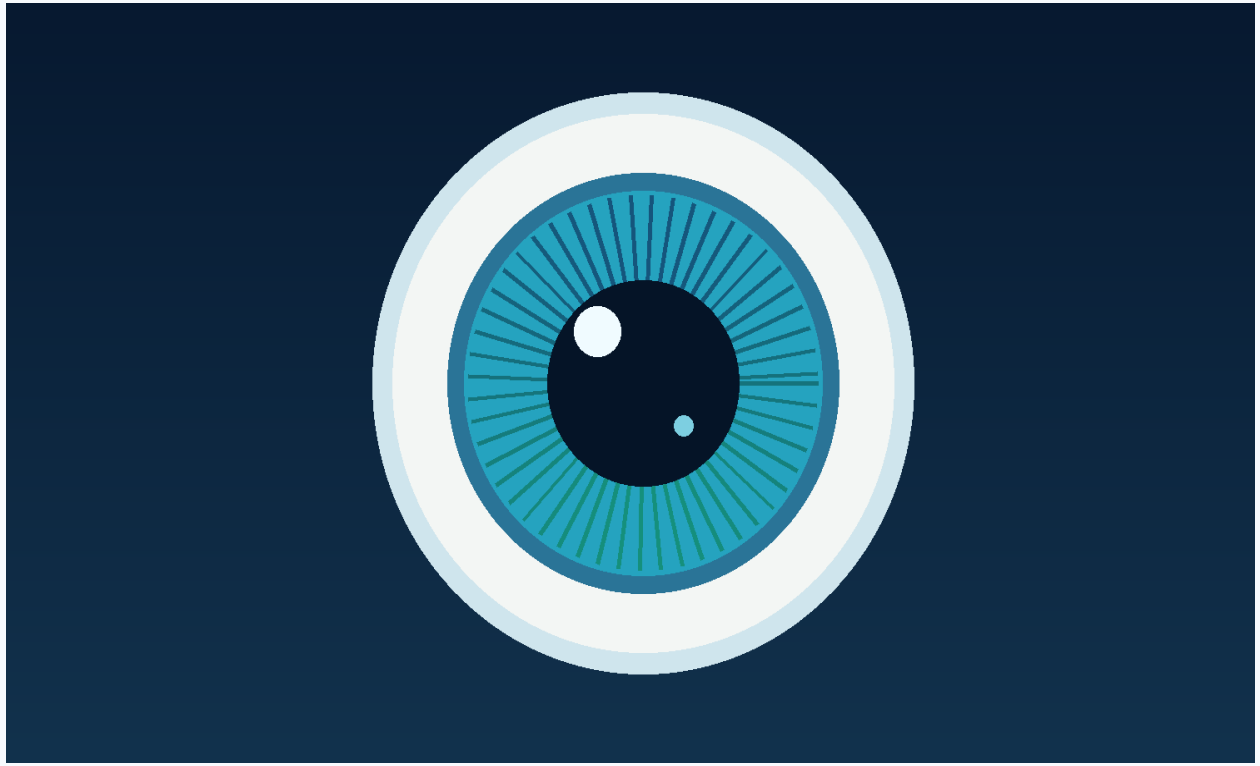
- Work in pairs with an eye anatomy worksheet.
- Label the cornea, iris, lens, retina and optic nerve.
- Explain at least three functions to a partner.
- Compare answers with a labelled diagram.



AI NAVIGATORS / GOOD PRACTICE

AI-SUPPORTED LESSON DESIGN

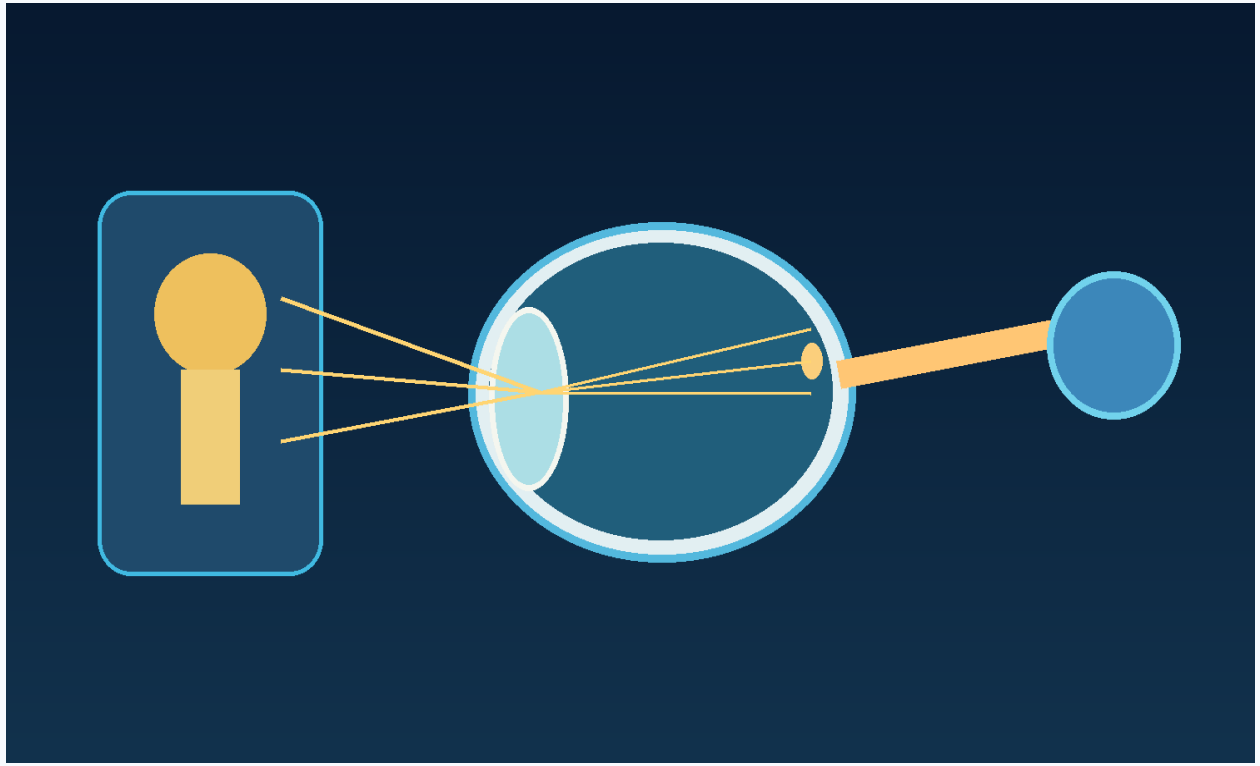
- ChatGPT: lesson ideas and accessible explanations.
- Canva: visual teaching materials.
- ChatGPT: interactive questions and quiz ideas.
- Teacher checks scientific accuracy before use.



AI NAVIGATORS / GOOD PRACTICE

EXAMPLE AI PROMPT

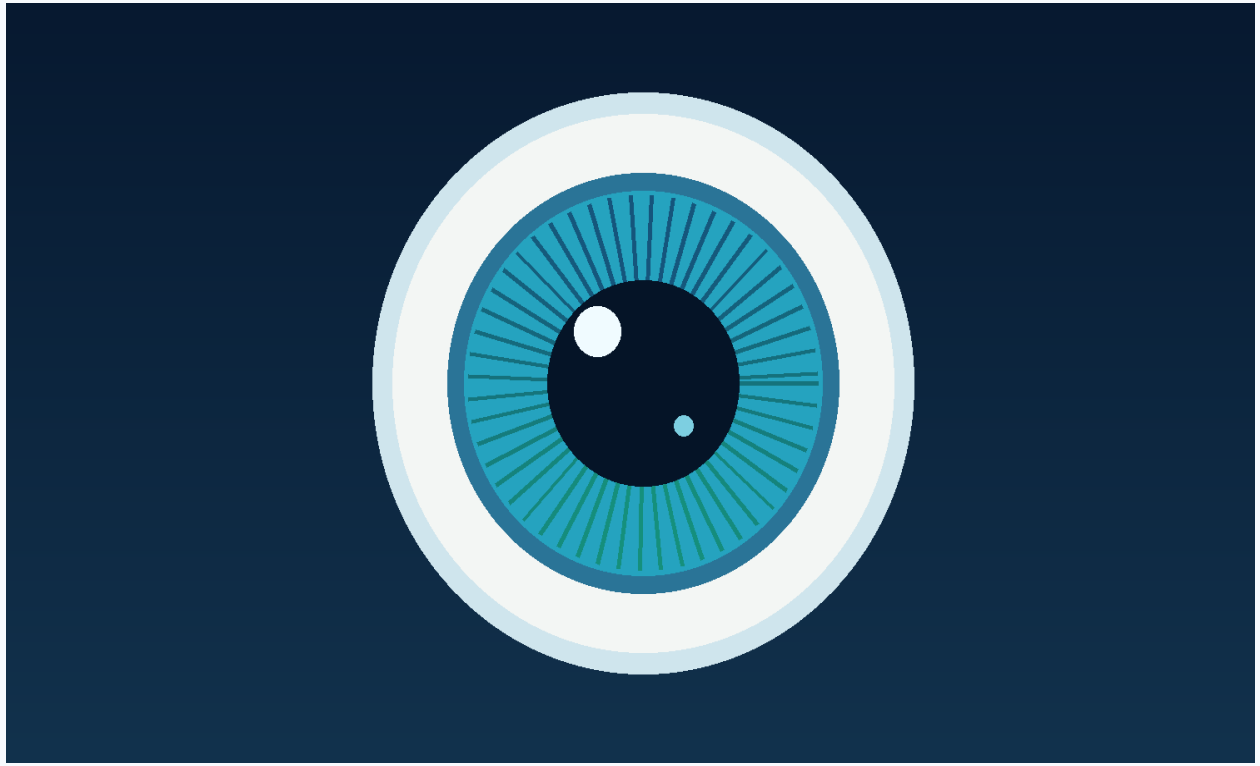
“Generate simple explanations and interactive questions about the anatomy of the eye for secondary medical students.”



AI NAVIGATORS / GOOD PRACTICE

KAHOOT / CHECK UNDERSTANDING

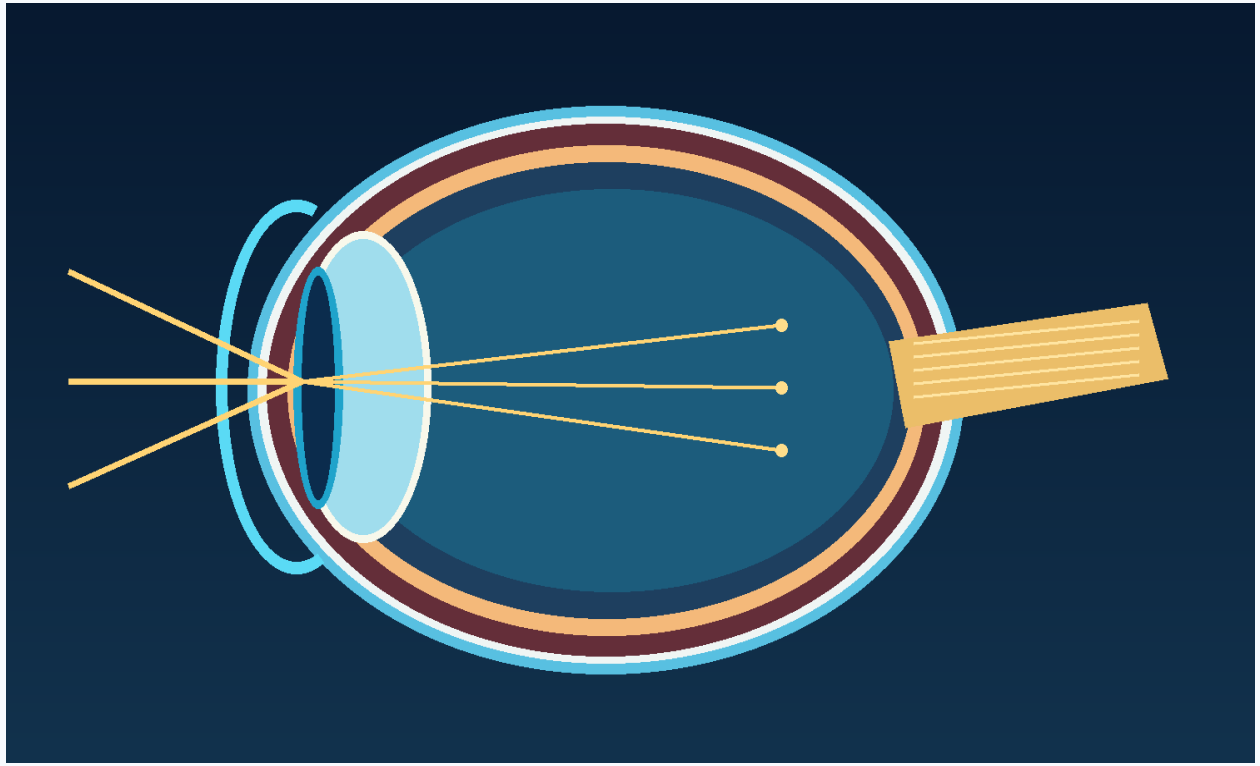
- Which structure controls the amount of light?
- Where are photoreceptors located?
- What is the function of the optic nerve?
- Students answer a short Kahoot review quiz.



AI NAVIGATORS / GOOD PRACTICE

INCLUSIVE DIFFERENTIATION

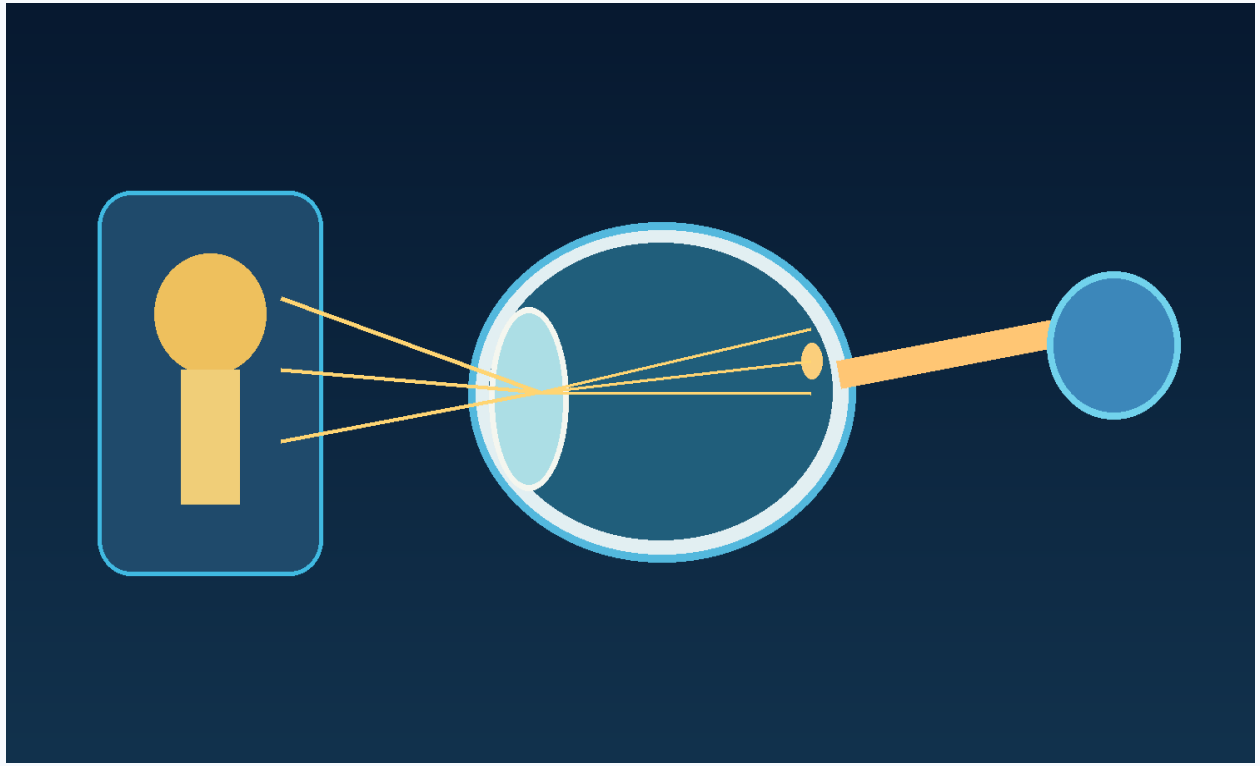
- Guided learners: labelled diagrams and prompts.
- Independent learners: blank anatomy diagrams.
- Advanced learners: explain functions using medical terms.
- Pair work supports discussion and peer feedback.



AI NAVIGATORS / GOOD PRACTICE

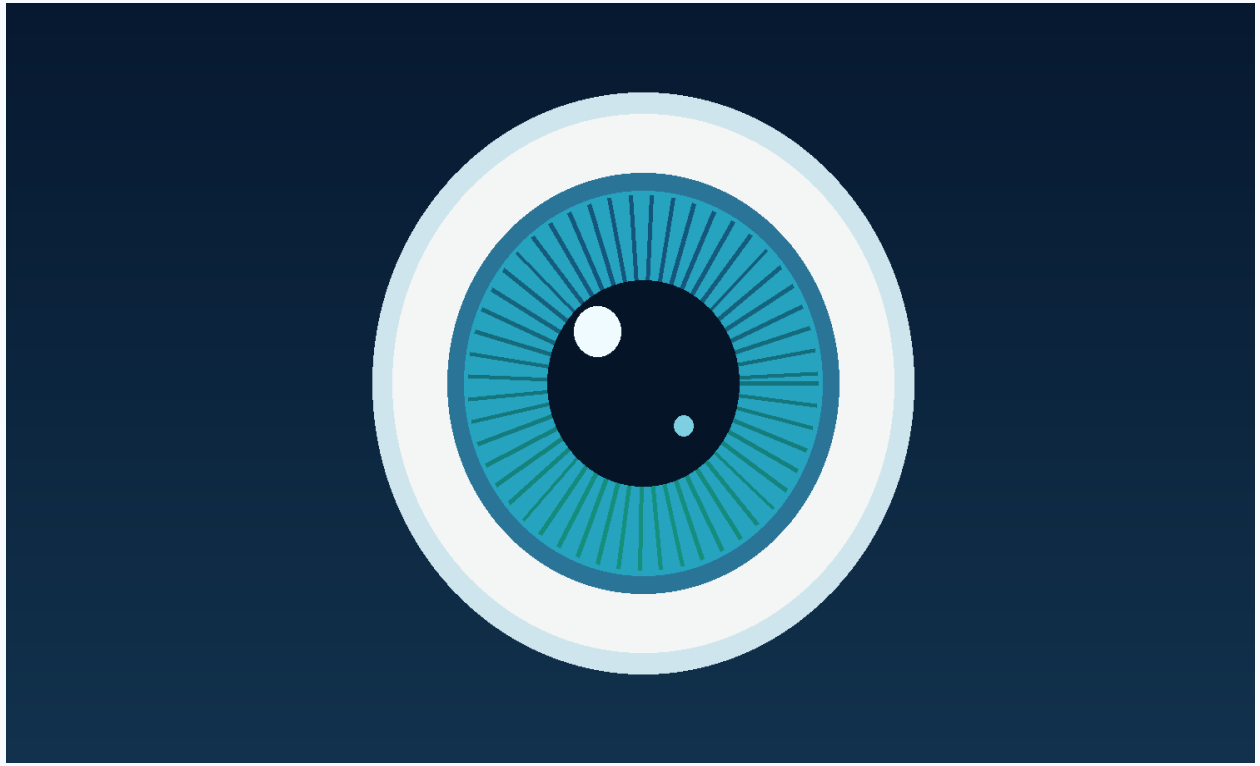
ASSESSMENT & EVIDENCE OF LEARNING

- Correct identification of main eye structures.
- Explanation of at least three functions.
- Active participation in pair work and discussion.
- Performance in the Kahoot review quiz.



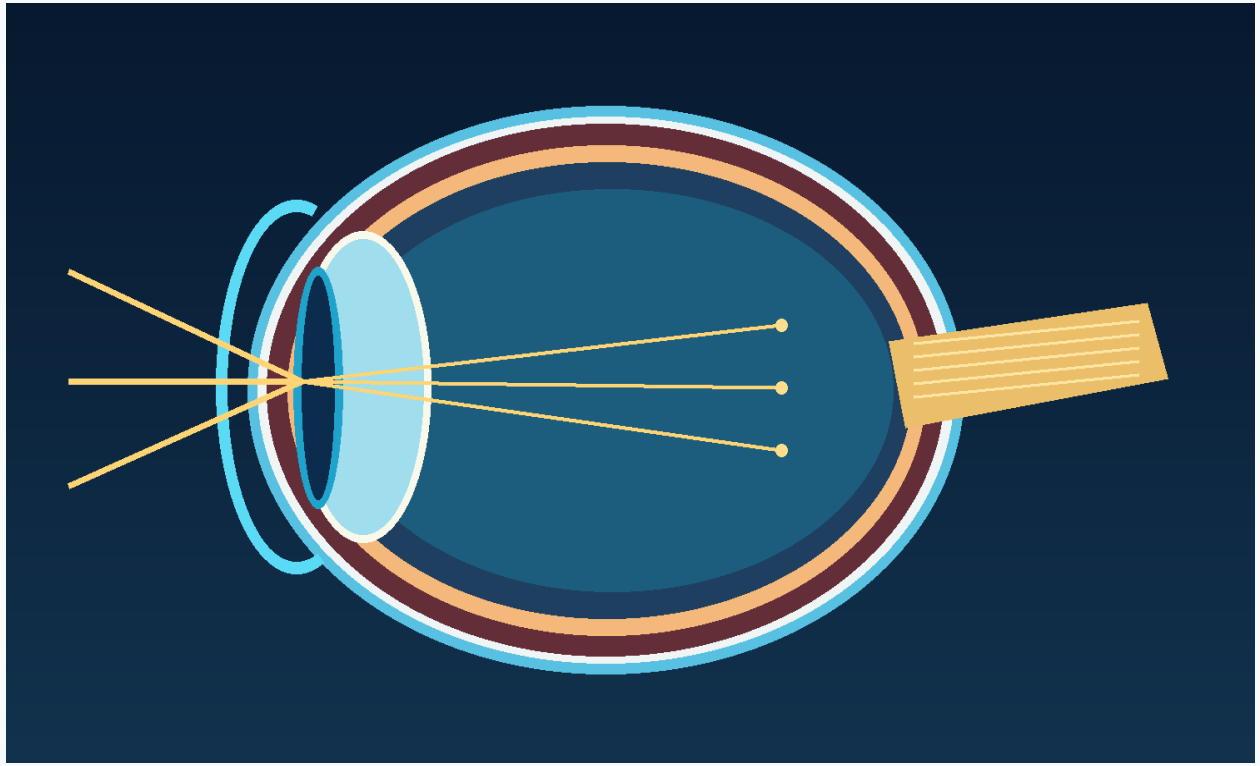
REFLECTION & HOMEWORK

- Each student shares one new thing learned.
- Draw and label the eye in a notebook.
- Write a short explanation of how vision occurs.
- Teacher reflection: allow more discussion time next lesson.



WHY THIS IS A GOOD PRACTICE

- Combines medical content with engaging visuals.
- Uses AI to support preparation and differentiation.
- Includes collaborative labelling and digital review.
- Transfers easily to other human anatomy topics.

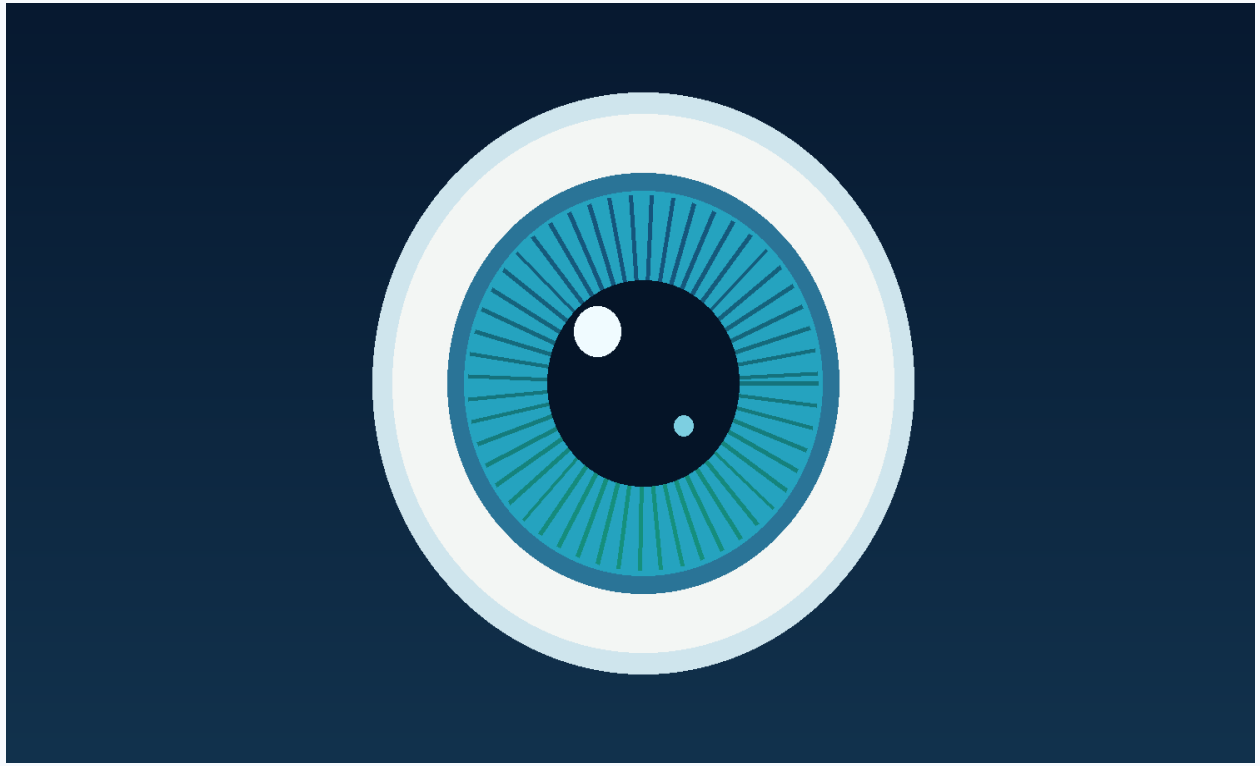


AI NAVIGATORS / GOOD PRACTICE

THANK YOU

Marina Atanaskoska

Anatomy and Physiology of the Eye



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MEASURING VOLTAGE, CURRENT & RESISTANCE

Digital multimeter • Electrotechnics

Secondary vocational education | Age 16
90 minutes: 45 theory + 45 practical

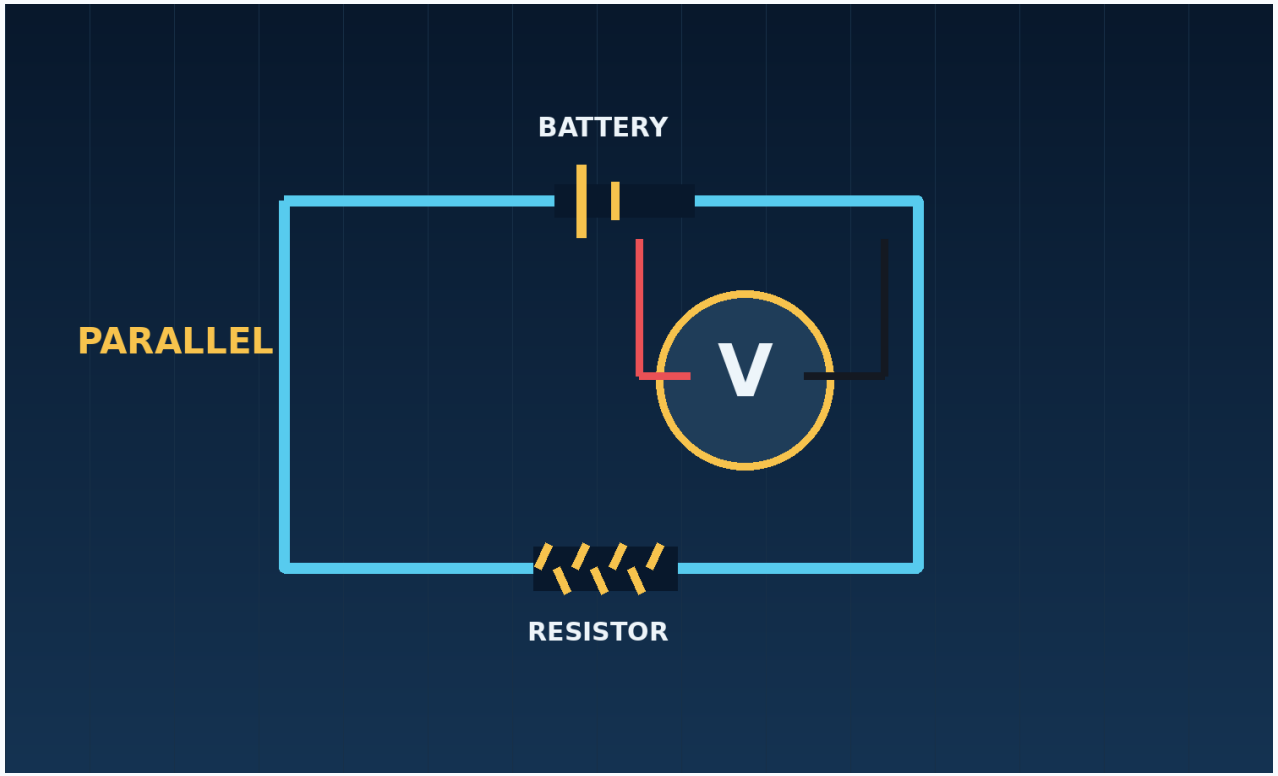
North Macedonia • Shared anonymously

THE LEARNING CHALLENGE

- Choose the correct multimeter mode.
- Make safe electrical connections.
- Measure real quantities rather than guess.
- Interpret readings in vehicle-related circuits.

SUCCESS CRITERIA

- Select V, A or Ω as appropriate.
- Use the correct range and probe sockets.
- Complete three measurement stations safely.
- Record values and explain discrepancies.



AI NAVIGATORS / TESTED GOOD PRACTICE

DIAGNOSTIC WARM-UP / 5 MIN

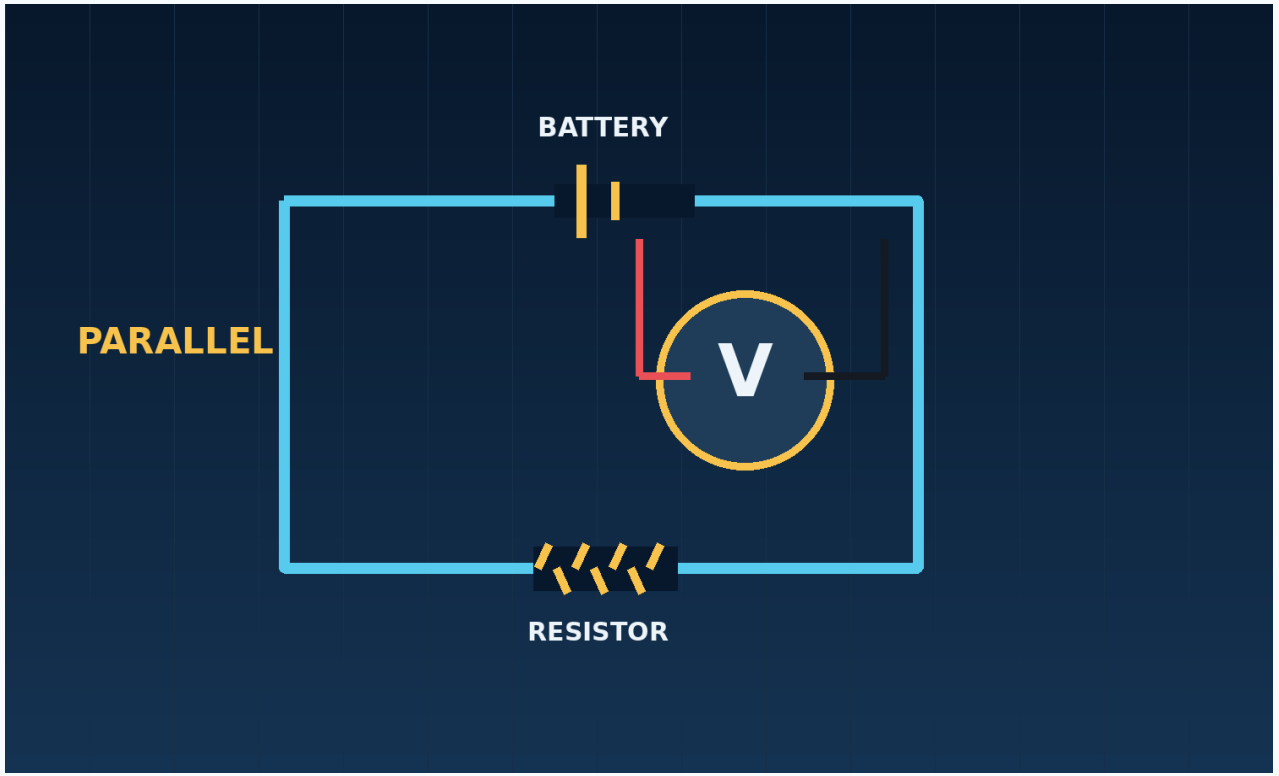
- Which setting measures battery voltage?
- Which setting measures resistor resistance?
- Which setting measures circuit current?
- Students explain the reasons for each choice.

TEACHER SAFETY DEMONSTRATION

- Check leads, meter rating and range.
- Connect voltage probes in parallel.
- Connect current measurement in series.
- Switch off power before resistance testing.

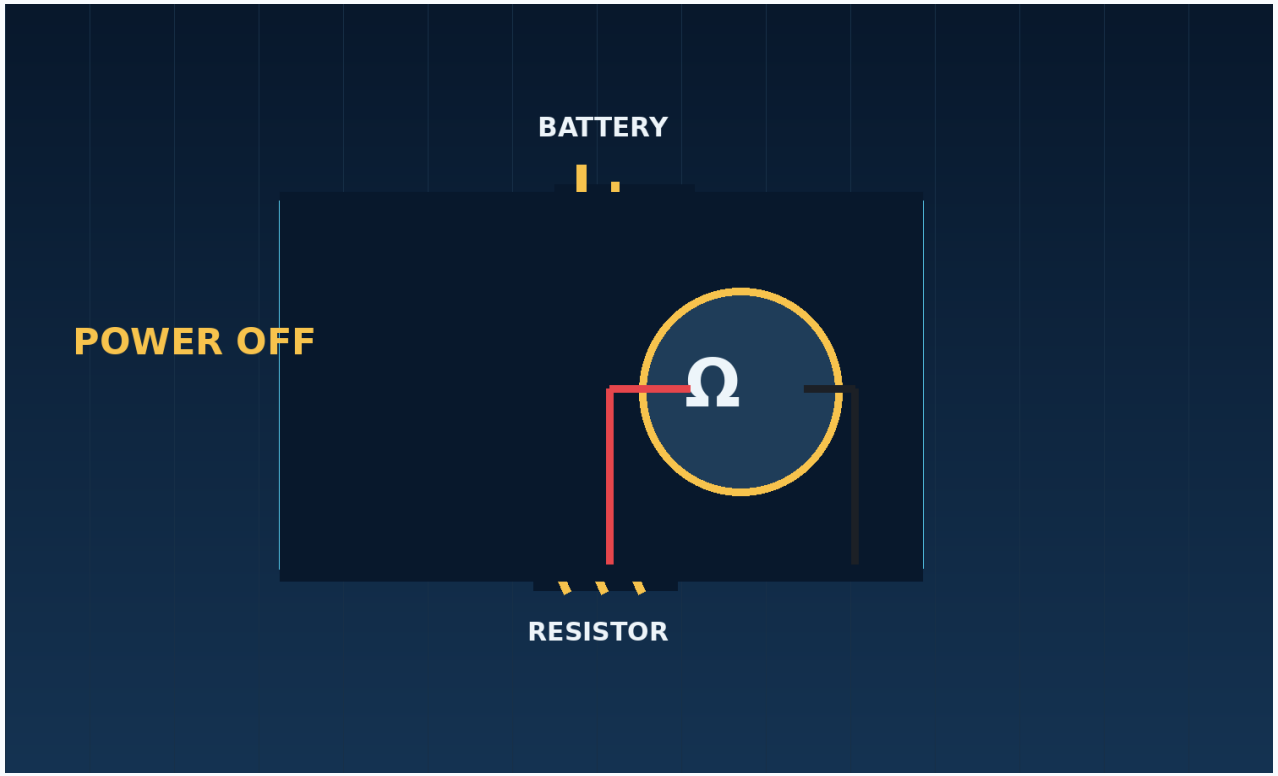
STATION 01 / DC VOLTAGE

- Select DC voltage mode.
- Connect probes across a low-voltage supply.
- Read and record the measured value.
- Compare the result with the expected value.



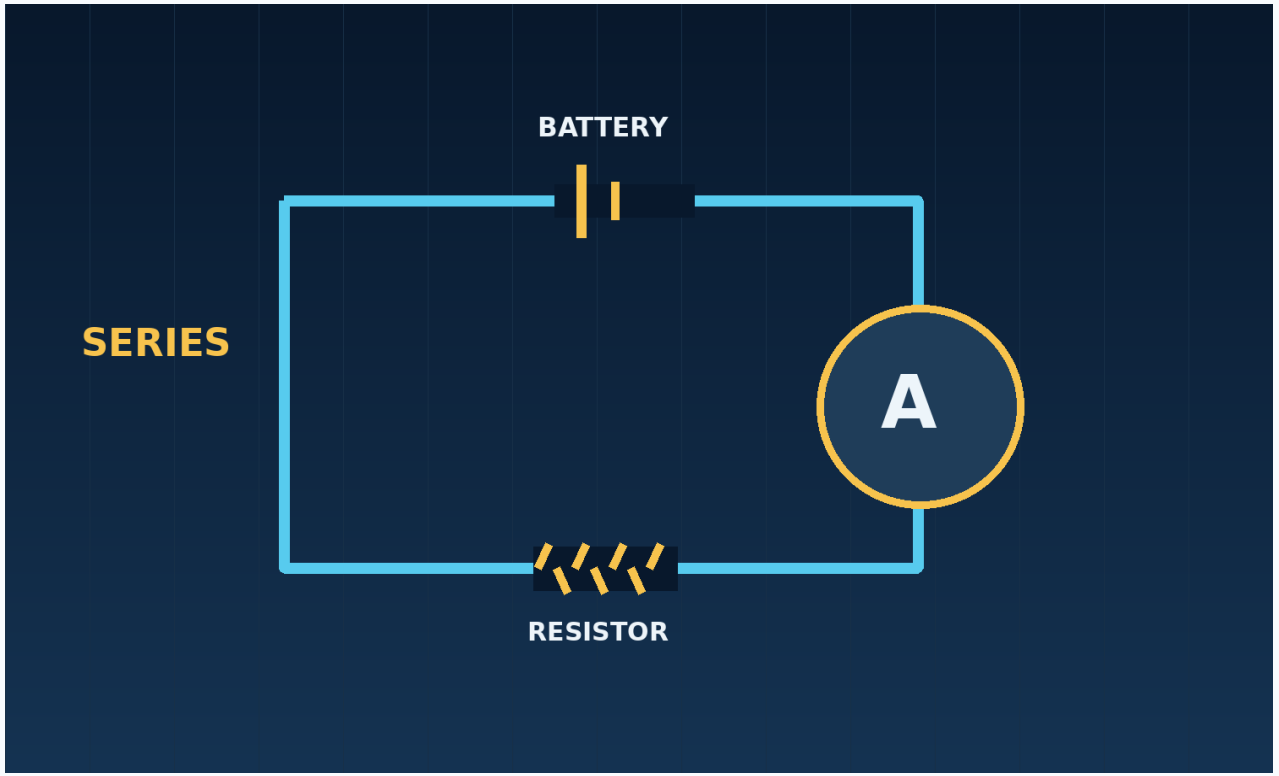
STATION 02 / RESISTANCE

- Disconnect power from the circuit.
- Select the Ω mode.
- Measure the resistance of a component.
- Record and interpret the result.



STATION 03 / CURRENT

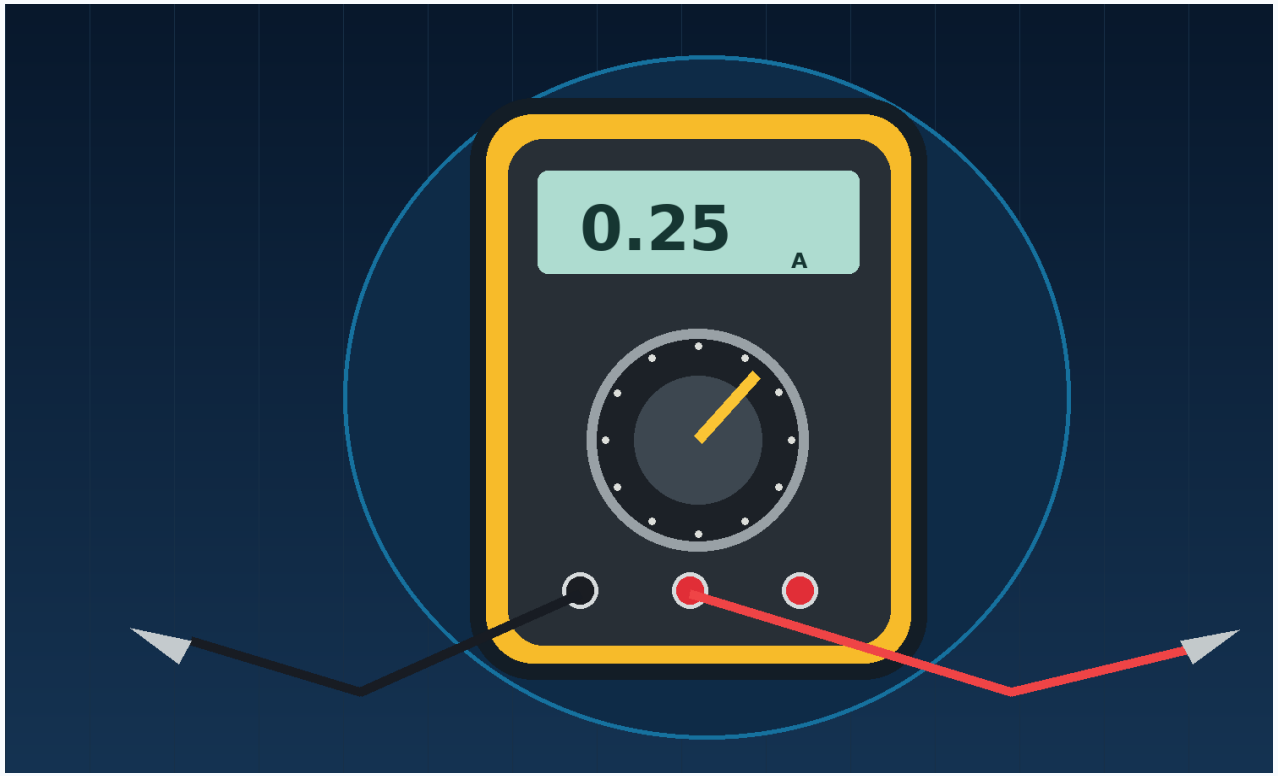
- De-energise before changing connections.
- Move the red lead to the rated current input.
- Insert the meter in series in a low-voltage circuit.
- Record the reading under teacher supervision.



AI NAVIGATORS / TESTED GOOD PRACTICE

THREE-STATION LAB ROTATION

- Small groups rotate through V, Ω and A tasks.
- Each group completes a measurement worksheet.
- Students compare actual and expected values.
- Advanced students calculate percentage difference.

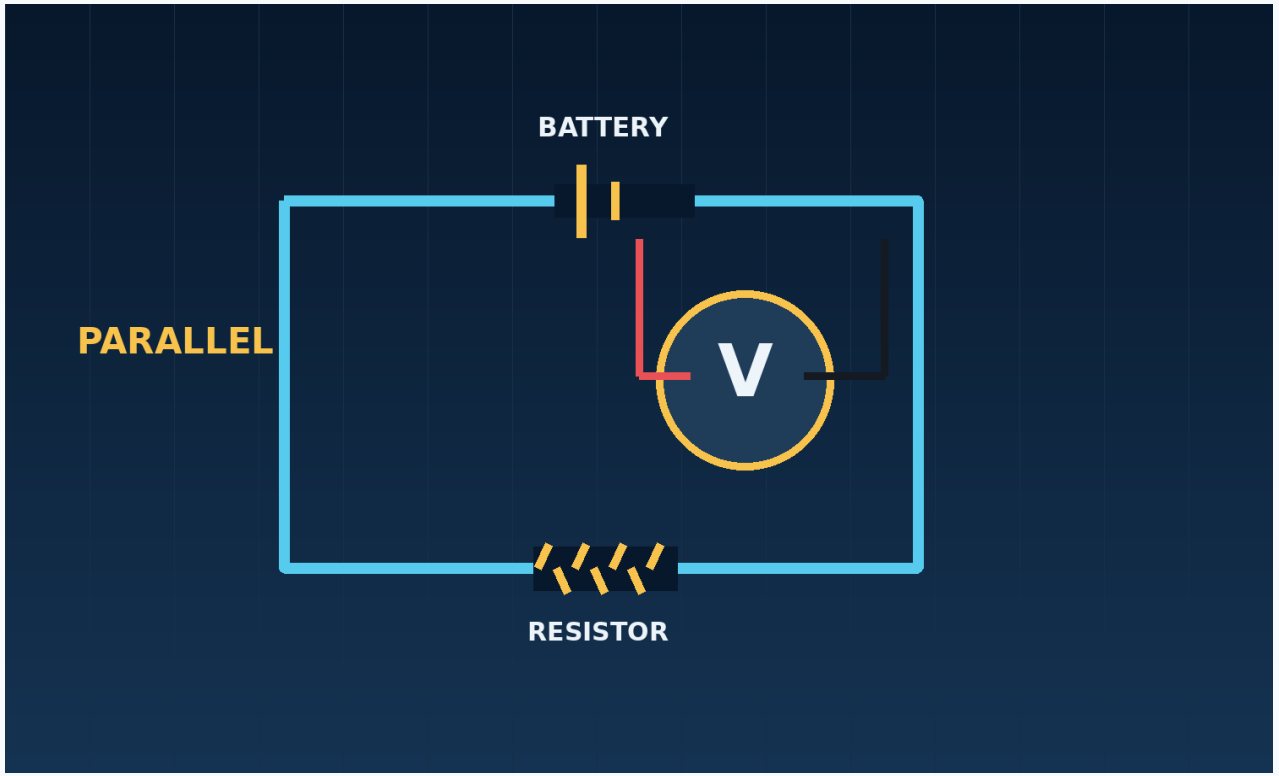


AI TOOLS USED IN PREPARATION

- Gamma: structured lesson presentation and prompts.
- Google NotebookLM: source-based notes and visual learning map.
- Teacher verifies all generated technical information.
- AI supports explanation; instruments verify results.

EXAMPLE GAMMA PROMPT

“Create a clear 8-slide vocational lesson presentation. Include objectives, concepts, visual explanation, classroom activity, practical task, formative assessment and closing summary.”

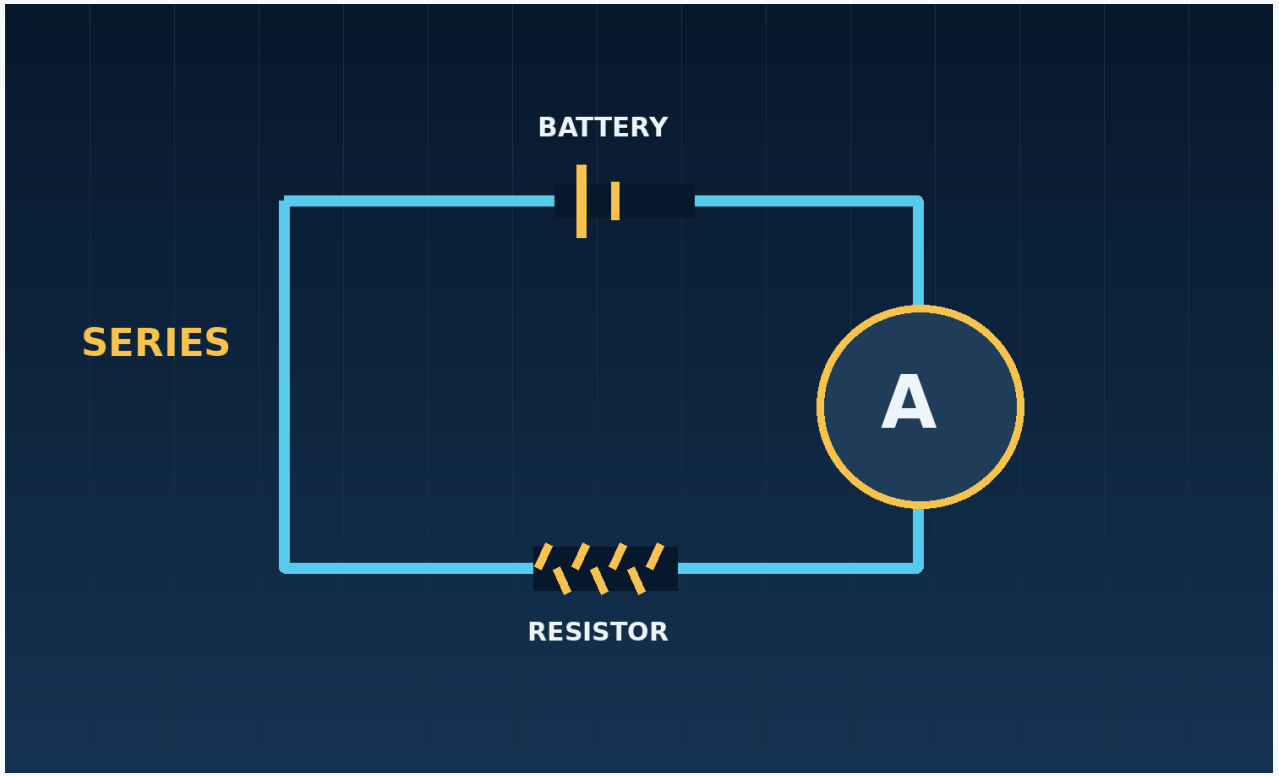


FORMATIVE ASSESSMENT

- Observe safe procedures at each station.
- Check worksheets and measured values.
- Ask students to explain connections.
- Finish with a short exit ticket.

RESPONSIBLE AI & DIFFERENTIATION

- Support: labelled diagrams and approved examples.
- Standard: independent station work.
- Advanced: estimate and analyse percentage error.
- AI output never replaces real measurement or safety checks.



WHY THIS PRACTICE IS TRANSFERABLE

- Links technical theory to hands-on measurement.
- Uses AI for structured teaching resources.
- Encourages collaborative practical problem-solving.
- Applies directly to vehicle diagnostic skills.

AI NAVIGATORS / TESTED GOOD PRACTICE

THANK YOU

Electrotechnics | Multimeter Measurements

North Macedonia • AI Navigators

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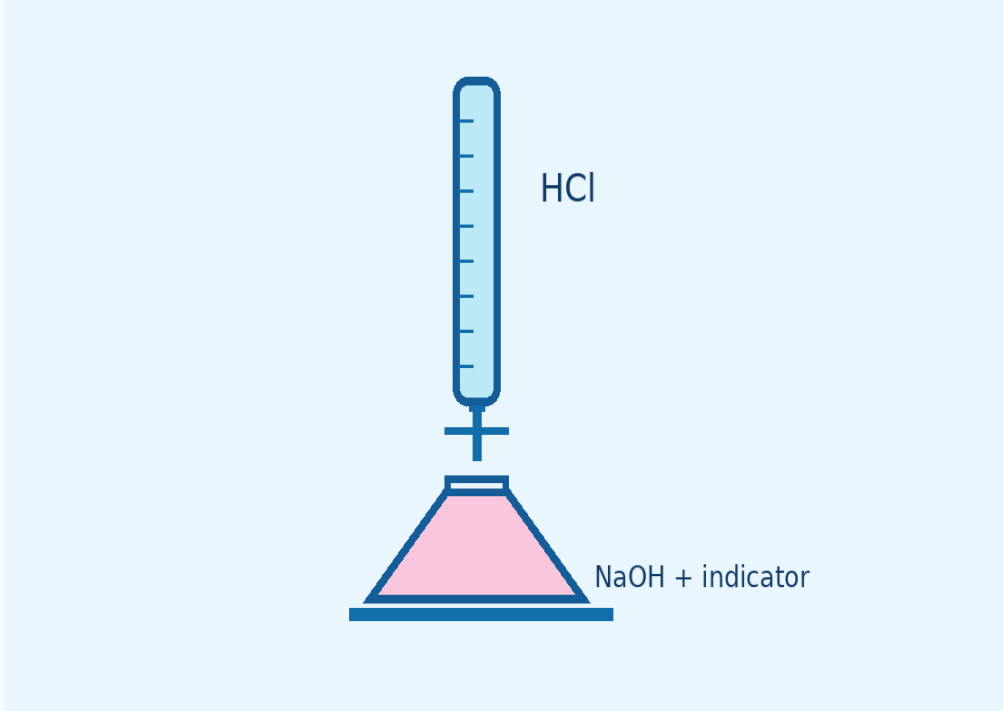
BEST PRACTICE / NORTH MACEDONIA

AI-ENHANCED CHEMISTRY LESSON

Acidimetric Determination of the Mass of NaOH

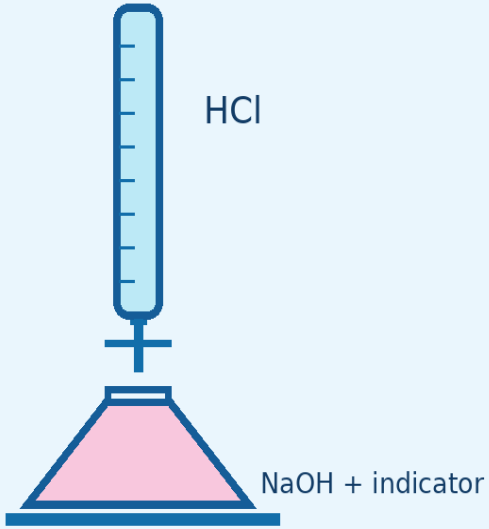
Zorica Jankulovska | SUGS “Marija Kiri-Sklodovska”, Skopje



AI NAVIGATORS / GOOD PRACTICE

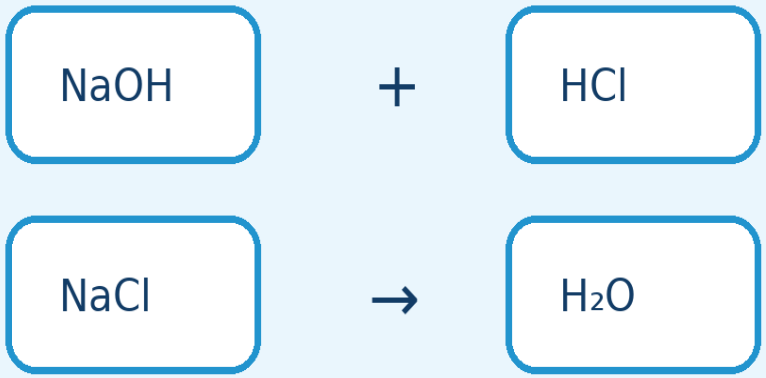
Lesson at a glance

- Secondary chemistry students, aged 16–17
- Duration: 45 minutes
- Curriculum: volumetric methods of analysis
- Hands-on acid–base titration with AI-supported learning



Learning objectives

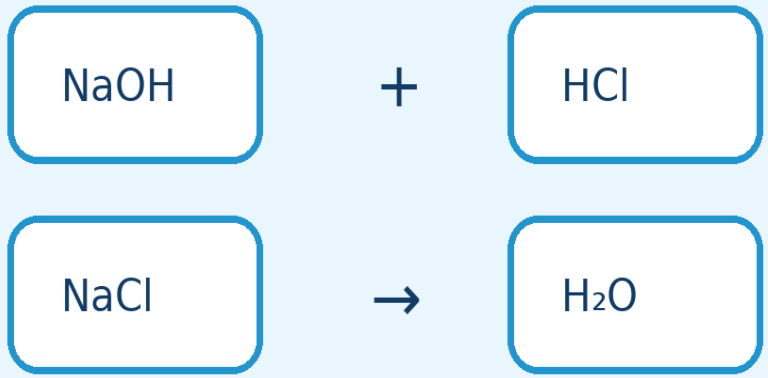
- Explain the principle of acidimetric analysis
- Describe the neutralisation of NaOH with HCl
- Identify the role of an indicator and the end point
- Connect titrant volume with the mass of NaOH



The chemistry behind the experiment

$$NaOH + HCl \rightarrow NaCl + H_2O$$

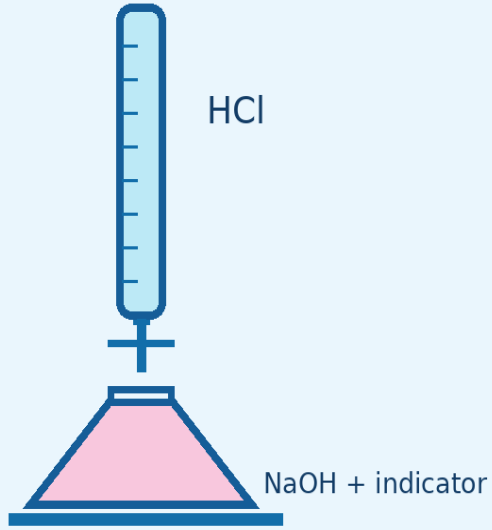
A 1:1 neutralisation reaction links the amount of hydrochloric acid used to the amount of sodium hydroxide in the sample.



AI NAVIGATORS / GOOD PRACTICE

A visual and engaging warm-up

- Short introductory video on acid–base titration
- Which solution is placed in the burette?
- Which indicator is used?
- How do we recognise the end point?



AI NAVIGATORS / GOOD PRACTICE

Practical laboratory procedure

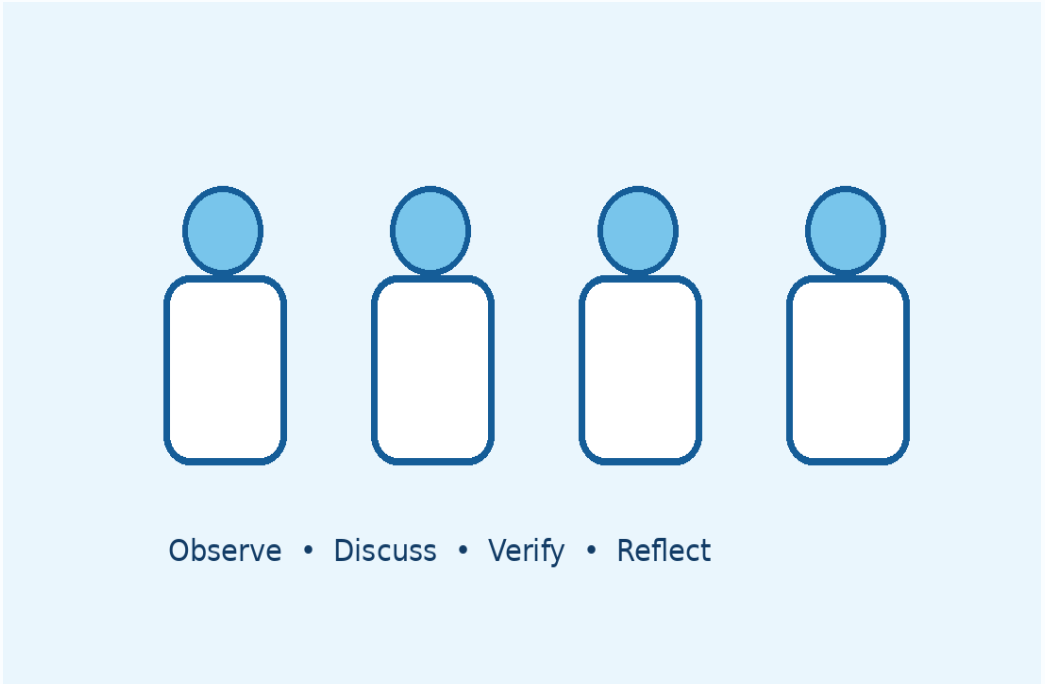
Students work in pairs, observe the colour change and record the volume of standard HCl used.

AI NAVIGATORS / GOOD PRACTICE

AI integration: teacher preparation

- ChatGPT: lesson ideas, explanations and review questions
- Canva: visual presentation materials

- AI-supported worksheets and differentiated tasks
- Teacher checks scientific accuracy before classroom use



Example AI prompt

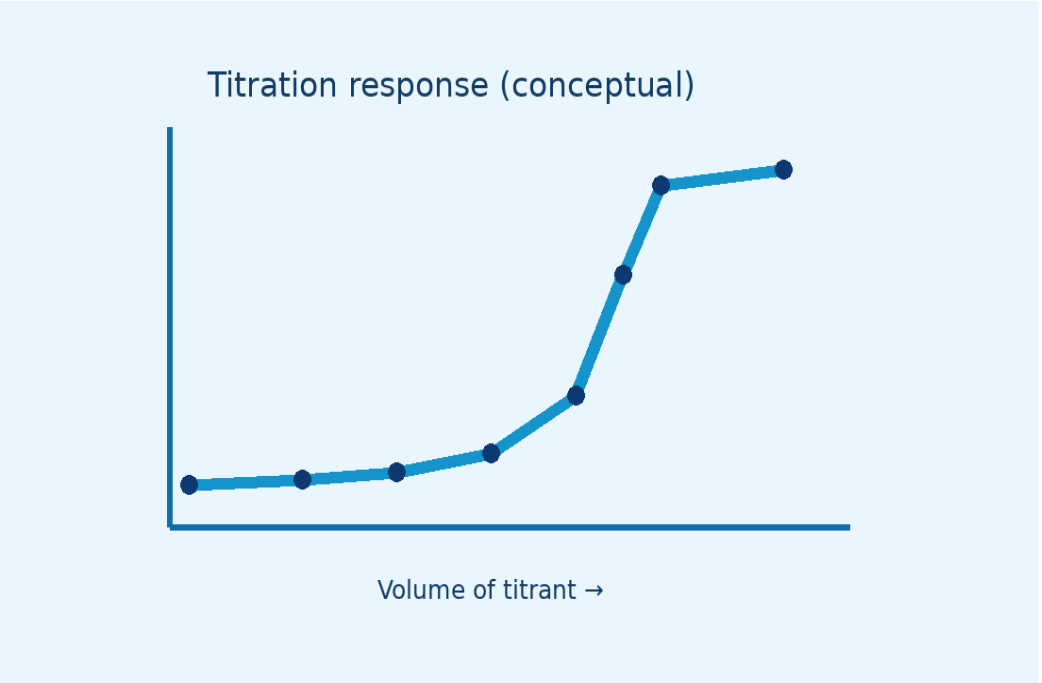
"Create a step-by-step explanation of acidimetric determination of sodium hydroxide suitable for secondary chemistry school students, including laboratory procedure and calculation examples."

AI output is a teaching aid — not a substitute for laboratory verification.

AI NAVIGATORS / GOOD PRACTICE

Student practice and differentiation

- Calculate the amount and mass of NaOH from data
- Compare results and discuss experimental errors
- Guided formulas and worksheets for students needing support
- Extension tasks with different concentrations and volumes



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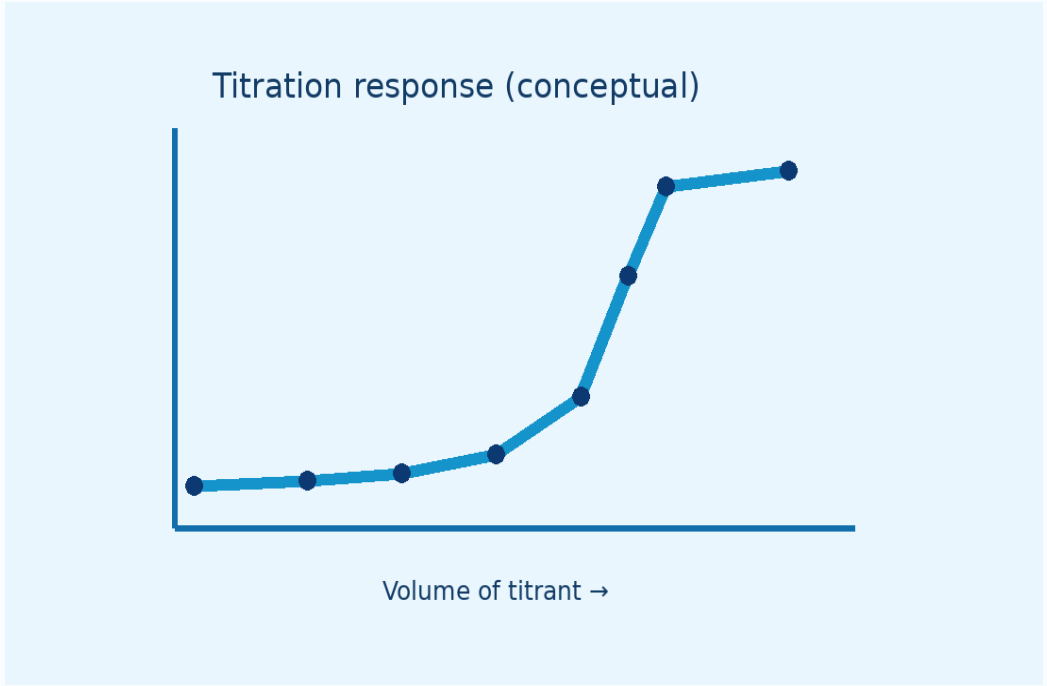
From titration data to mass

$$n(HCl) = c(HCl) \times V(HCl)$$

$$n(NaOH) = n(HCl)$$

$$m(NaOH) = n(NaOH) \times M(NaOH)$$

Use measured values and convert volume to litres.



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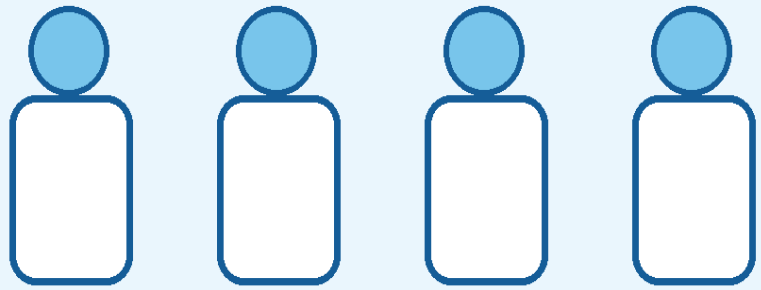
Assessment and evidence of learning

- Correctly identify reagents and equipment
- Explain the balanced neutralisation equation
- Calculate NaOH mass using experimental data
- Participate safely in laboratory work
- Respond to oral questions and a Kahoot review quiz



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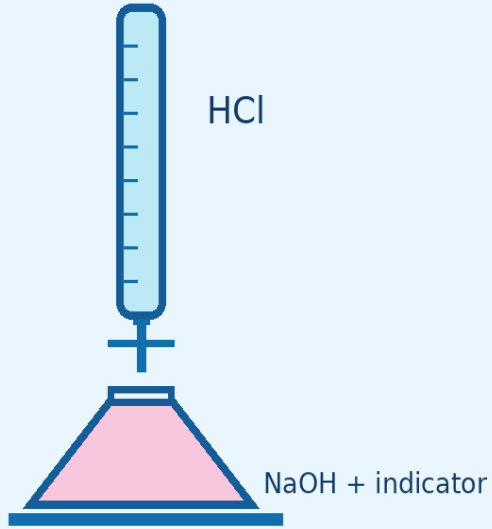
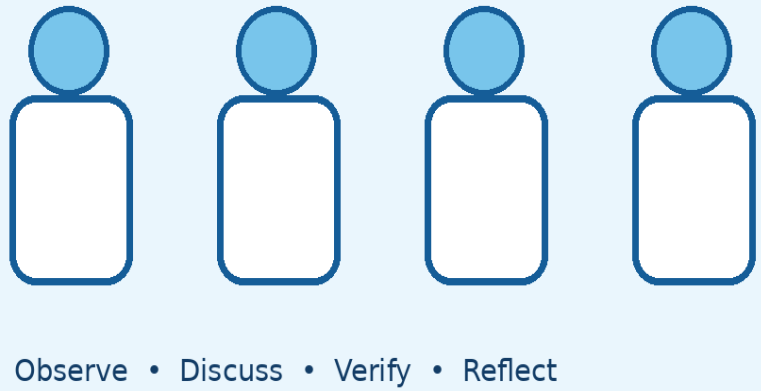
Teacher reflection and lessons learned

- Students were actively engaged in practical work
- Visual and interactive resources supported understanding
- AI helped prepare questions, worksheets and lesson materials
- More time for discussion and practical activities is desirable



Why this is a transferable good practice

- Combines authentic laboratory work with digital learning
- Encourages collaboration, calculation and critical thinking
- Offers differentiated pathways for mixed-ability groups
- Keeps the teacher responsible for safety and accuracy



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Thank you

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