

WORK AND ENERGY AGE: 5-10y

Version1, March 2021



I eat well,
No, no, not until my stomach swells.
My food gives me energy,
Making me feel like a charged battery.
Now I can do some work,
And add to it my little quirk.



ASSIGNMENT 1

In the following exercise, children need to identify if work is getting done. Work is said to be done, when applied force causes the object to move in direction of the force. Work is "not done" when applied force does not result in movement of the object and when direction of force and direction of movement are different. With the help of Arrows children will indicate the direction of force, the direction of movement of object and with the help of (✓) or (✗) indicate if work is getting done.

1

- ☐ Direction of Force
- ☐ Direction of Movement
- ☐ Work done



2

- ☐ Direction of Force
- ☐ Direction of Movement
- ☐ Work done



3

- ☐ Direction of Force
- ☐ Direction of Movement
- ☐ Work done



4

- ☐ Direction of Force
- ☐ Direction of Movement
- ☐ Work done



5

- ☐ Direction of Force
- ☐ Direction of Movement
- ☐ Work done



6

- ☐ Direction of Force
- ☐ Direction of Movement
- ☐ Work done



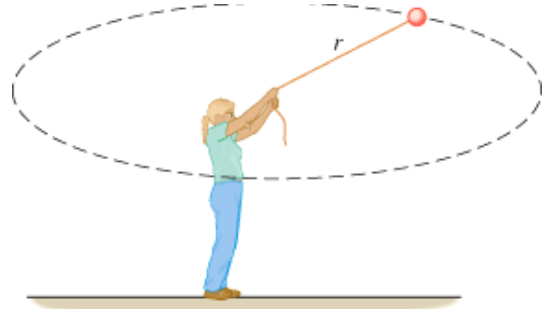
7

- ☐ Direction of Force
- ☐ Direction of Movement
- ☐ Work done



8

- ☐ Direction of Force
- ☐ Direction of Movement
- ☐ Work done



9

- ☐ Direction of Force
- ☐ Direction of Movement
- ☐ Work done



10

- ☐ Direction of Force
- ☐ Direction of Movement
- ☐ Work done



ASSIGNMENT 2

Energy is the capacity to do work. More energy results in more work being accomplished. With the help of symbols (<, =) children will identify which image represents more energy. Further, they will place a (✓) in the circle for the image, where more work is getting done.

1



ENERGY

<, =



2



ENERGY

<, =



2



ENERGY

<, =



4



ENERGY

<, =



5



ENERGY

<, =



6

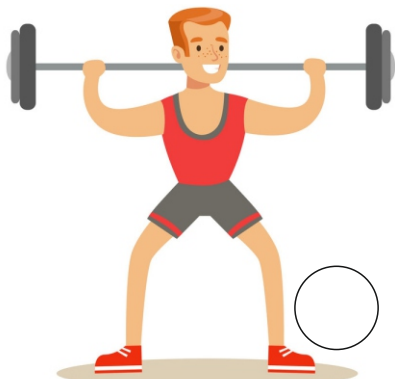


ENERGY

<, =

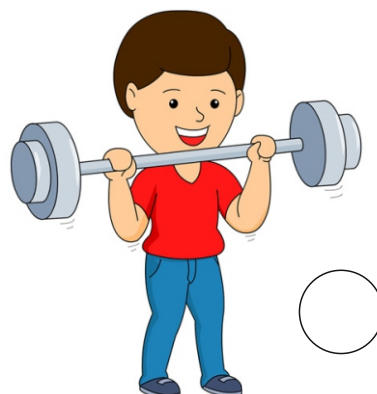


8



ENERGY

<, =



ASSIGNMENT 3

The paragraphs below are describing different forms of energy generation. However, there is a mistake in the description. Children need to figure out what is wrong and why is it wrong.

1

Rainforests are forests with high and continuous rainfall. There are several rain forests in India. The western ghats which stretch from the state of Maharashtra to Karnataka and Tamilnadu have rain forests. On a stretch between the Karnataka and Tamilnadu solar panels have been fitted within the forests. This will allow trapping solar energy. Solar energy is a renewable source of energy.

Reasons:

2

In the northwest of India, we have the Great Indian Thar desert. The Thar receives little rainfall. Throughout the year, Thar receives only 100mm of rain. Due to dry climatic conditions, there is no vegetation in the desert. Since the land of the desert is vast and free, a hydroelectric power plant has been set up in the desert. Hydroelectricity is a clean, renewable source of energy. This power plant will supply electricity to the near-by villages.

Reasons:

3

In northern India they have recently identified a coal mine. Coal is burnt and used as a fuel. Just near the coal mine is a hydroelectric power plant. If the source of coal is so nearby, should it be a hydroelectric power plant? we think it should be a thermal power plant, but can you think how will coal be used in a thermal power plant?

Reasons:

ASSIGNMENT 4

The activity aims to help children comprehend, reproduce and practice writing. Children will read the paragraph and answer the questions that follow.

Tipu and Sriram are incredibly good friends. Tipu is tall and weighs 50kg whereas Sriram is equally tall but weighs 40 kg. Both study in the same class. The teacher has asked the entire class to submit their notebooks for correction. Tipu and Sultan volunteer to collect and get the books to her.

Tipu carries 38 books whereas Sriram carries 15. The two reach the teachers' room and leave the books on the table. Meanwhile another teacher tells them to pick the books and leave them down under the table.

Evening they are walking back home, when they see a tree branch fallen across the road and blocking the road. Tipu says I am strong I can move the branch alone. Well, he tries but cannot. Sriram says, he wishes to try to, but he cannot, either. Finally, they decide to work together and move the branch out of the way.

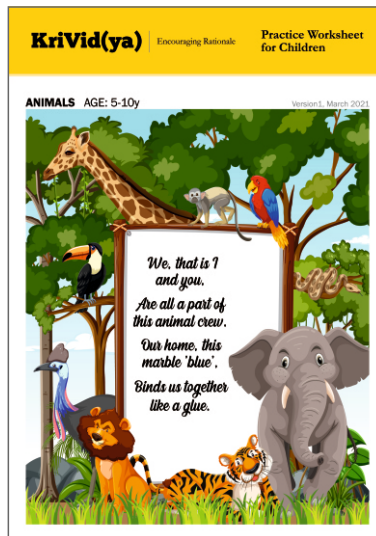
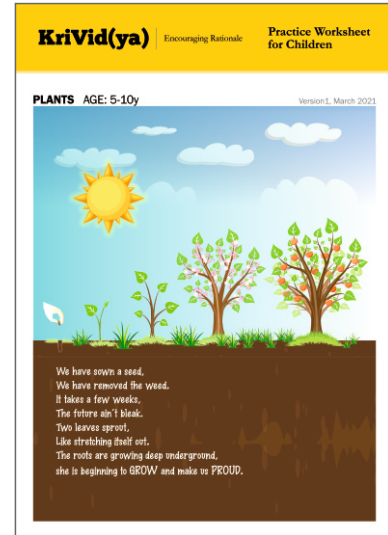
Questions

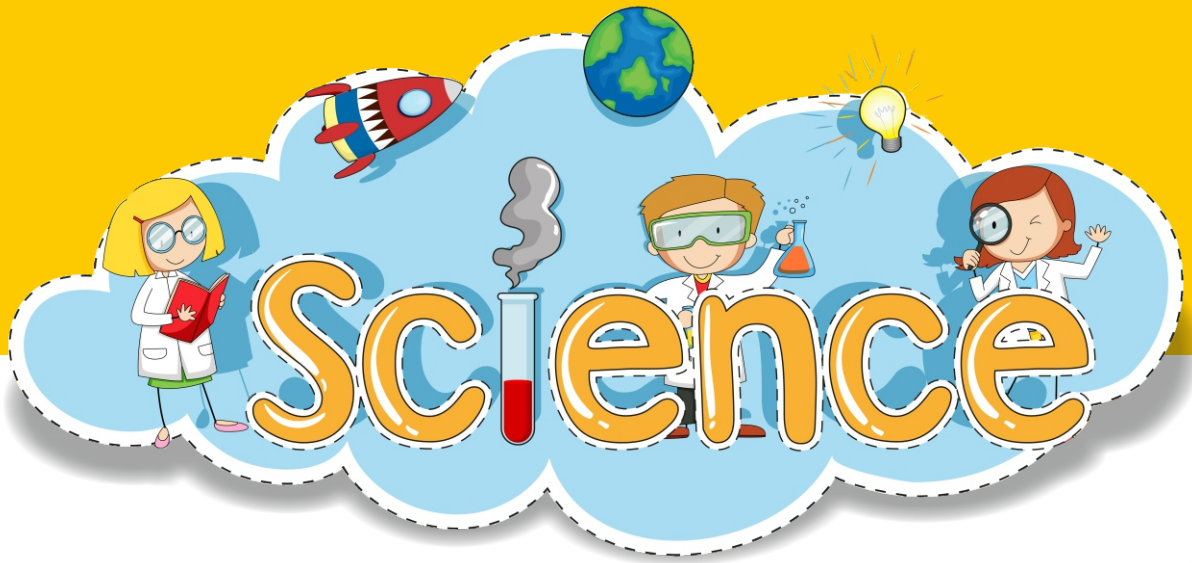
Can you identify elements of work done in the passage above?

Can you identify examples of higher energy from the paragraph above?

Can you list a few more activities each for Tipu and Sriram, which will express work done by them?

Other books in this series include:-





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a do-it, see-it, learn-it approach. Our learning models
are aimed at encouraging rationale and fostering a
concept driven understanding of science.