Name & Surname: _____ Class: _____ Date: _____

GRAVITY EXPLORERS

Why unsupported things fall to Earth

About 45 minutes Level ★★★☆☆

KEY WORDS

gravity: invisible pull towards Earth

force: a push or a pull

unsupported: with nothing holding it up

supported: held up so it cannot fall

centre: middle point of Earth

pull: to bring towards

TASK A

/2

Spot the mistake in each idea about gravity. Write the correct idea.



Student A

Unsupported objects stay still in mid-air because **gravity** holds them up.

What mistake did Student A make? Write the correct fact.



Student B

Only heavy things fall. Light things like feathers are not pulled by **gravity**.

What mistake did Student B make? Write the correct fact.

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TALK ABOUT FALLING

Discuss what happens without **support**.

TASK B

/3

Complete the talk about an unsupported rubber.

Student A I am holding a rubber. What happens if I let go without **support**?

Student B .....

.....

Student A Why does it fall down towards the **Earth** and not up?

Student B .....

.....

Student A What if I leave it on the table with **support**?

Student B .....

.....

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EXPLAIN AND DECIDE

Use evidence to explain **gravity** and choose well.

TASK C

/4

Explain why a dropped ball falls using gravity.

Why does an unsupported ball fall towards the Earth?

P **Point**
I think that ...

E **Evidence**
For example, ...

E **Explain**
This shows that ...

L **Link**
Therefore, ...

TASK D

/8

Compare ways to show gravity makes things fall. Pick the best.

You want to show that unsupported objects fall towards the Earth.

Drop an unsupported ball from your hand
Advantage

Disadvantage

Throw a ball up with a push
Advantage

Disadvantage

Leave a ball supported on a table
Advantage

Disadvantage

Which is the most suitable? Justify your choice.

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SORT AND RANK

Sort what falls and rank signs of **gravity**.

TASK E

/3

Complete the table to show what gravity does.

Situation	Falls or stays?
Rubber held then let go without support	
Ball left supported on a table	
Leaf dropped from an unsupported hand	

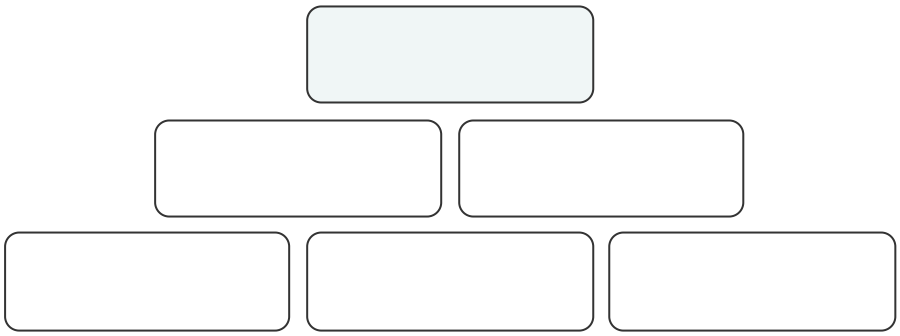
TASK F

Rank the signs of gravity from most to least convincing. Explain your top choice.

rank signs of gravity from most to least convincing

An unsupported apple falls from a tree | A dropped ball falls to the ground | A thrown stone comes back down | You jump up and land back down | A supported book stays on a table | Water pours down into a cup

Most convincing



Why did you put your top choice at the top?

.....

.....

HOW DID I DO?

Circle a face for each line.

I can explain that gravity pulls unsupported objects towards Earth.

I can describe gravity as a force between Earth and an object.

I can tell when an object is supported or unsupported.

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Answer sheet: Gravity Explorers

Task A

1. Student A: Gravity does not hold things up. It pulls unsupported objects down towards the Earth.
2. Student B: Gravity pulls all objects down, heavy and light, towards the Earth.

Task B

1. Student B: It will fall towards the Earth because of gravity.
2. Student B: Gravity acts between the Earth and the rubber and pulls it down.
3. Student B: Then it is supported, so it stays still and does not fall.

Task C

Example: The ball falls because gravity pulls it down. For example, when support is removed it drops towards the Earth. This shows the pull acts between the Earth and the ball. Therefore all unsupported objects fall down.

Task D

Drop an unsupported ball from your hand: + You clearly remove support, so gravity pulls it straight down. − It falls quickly, so you must watch the fall carefully.

Throw a ball up with a push: + You see it slow down then fall back because of gravity. − It moves fast and the fall is harder to see.

Leave a ball supported on a table: + You see that supported objects stay still. − Nothing falls, so you do not see gravity pulling down.

Dropping an unsupported ball is best because it clearly shows gravity pulling it towards the Earth.

Task E

Rubber held then let go without support | Falls down towards the Earth

Ball left supported on a table | Stays still because of support

Leaf dropped from an unsupported hand | Falls down towards the Earth

Task F

Answers will vary.

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