



EduTrend Contents

EDUTECH · GAMIFICATION IN STEM EDUCATION · PRIMARY

Prediction Points

A floating and sinking mission where stars go to predictions with reasons, not lucky guesses

Ages 7–10

Level: Foundation

40 minutes

Teams of 3–4 · up to 30

Activity 01

Inside: activity at a glance · step-by-step session plan · facilitator notes · 3 pupil worksheets · assessment checklist

ACTIVITY 01 · AT A GLANCE

Prediction Points

Each team has a tub of water and eight everyday objects. For each object, the team predicts float or sink and writes a reason, such as “it is light for its size”. Then they test and record. Stars go to predictions with a reason and to clear records, whether the prediction was right or wrong. The class ends by sharing the most surprising result.

Learning outcomes

By the end of the session pupils can:

- predict with a reason;
- test fairly;
- record results clearly;
- explain a surprising result.

KEY WORDS

predict · reason · float · sink ·
record · star

CURRICULUM LINKS

Science: materials and forces.
English: explaining. Maths: tables.

1

GOAL

What is the
learning goal?

2

CHALLENGE

What is the task?

3

FEEDBACK

How do players
know?

4

PROGRESS

How is growth
shown?

5

RETRY

Can they try again?

6

REFLECT

Did it help
learning?

Materials (per team)

- Tub of water and towel
- Eight objects (cork, coin, apple, spoon, sponge, foil ball, pencil, plastic lid)
- Star chart
- Worksheets 1, 2 and 3

Before the session

- Fill tubs and lay towels.
- Collect objects.
- Draw a star chart.
- Test objects yourself first.

SAFETY

Mop spills straight away. No glass objects. Wash hands after using the water.

ACTIVITY 01 · SESSION PLAN

Step by step

Stars reward reasoning and recording, never just a correct guess.

Time	What happens	Say or ask
0–5 min Mission	Explain the mission and star rules.	<i>"How do you earn a star?"</i>
5–15 min Predict	Teams predict with reasons.	<i>"Why do you think so?"</i>
15–30 min Test	Test and record each object.	<i>"Was your reason right?"</i>
30–40 min Share	Share surprises and award stars.	<i>"What surprised you?"</i>

CHALLENGE CARD (print or copy onto the board)

Earn stars by predicting with good reasons and recording carefully, even when a prediction turns out wrong.

ACTIVITY 01 · FACILITATOR NOTES

The STEM game know-how in brief

Whether an object floats depends on how heavy it is for its size (its density) compared with water, not just its weight.

Rewarding reasons rather than correct guesses keeps the focus on scientific thinking. Wrong predictions with good reasons teach the most.

Common ideas to listen for

- “Heavy things always sink.” A large apple floats.
- “Small things always float.” A coin sinks.
- “A wrong prediction is a failure.” It shows what to learn.

Adapting the activity

Support

Give reason starters: “because it is...”.

Stretch

Change the foil ball into a boat shape and retest.

WORKSHEET 1

Predict and test

Name: _____

Class: _____ Date: _____

Predict, give a reason, then test.

Predict and test

Object	Prediction	Reason	Result

WORKSHEET 2

Star record

Stars earned.

Star record

Star for	Tally
Prediction with a reason	
Clear record	
Explaining a surprise	

WORKSHEET 3

Most surprising result

Explain it.

The most surprising result was... because...

FOR THE TEACHER

Assessment checklist

Use during the session. One sheet covers up to eight pupils; copy as needed.

Pupil	Predicts with reasons	Records clearly	Explains surprises

Suggested codes: W = working towards · E = expected · G = greater depth

ABOUT THIS ACTIVITY

Prediction Points is a sample activity from the EduTrend Contents Edutech Gamification in STEM Education programme (primary, level: foundation). Every activity in the programme follows the same format: a practical challenge, a clear session plan, facilitator notes and ready-to-print worksheets, so that teachers, club leaders and parents can run it without extra preparation.

Full 15-, 20- and 32-week programmes are available from EduStore at edutrend.org.

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