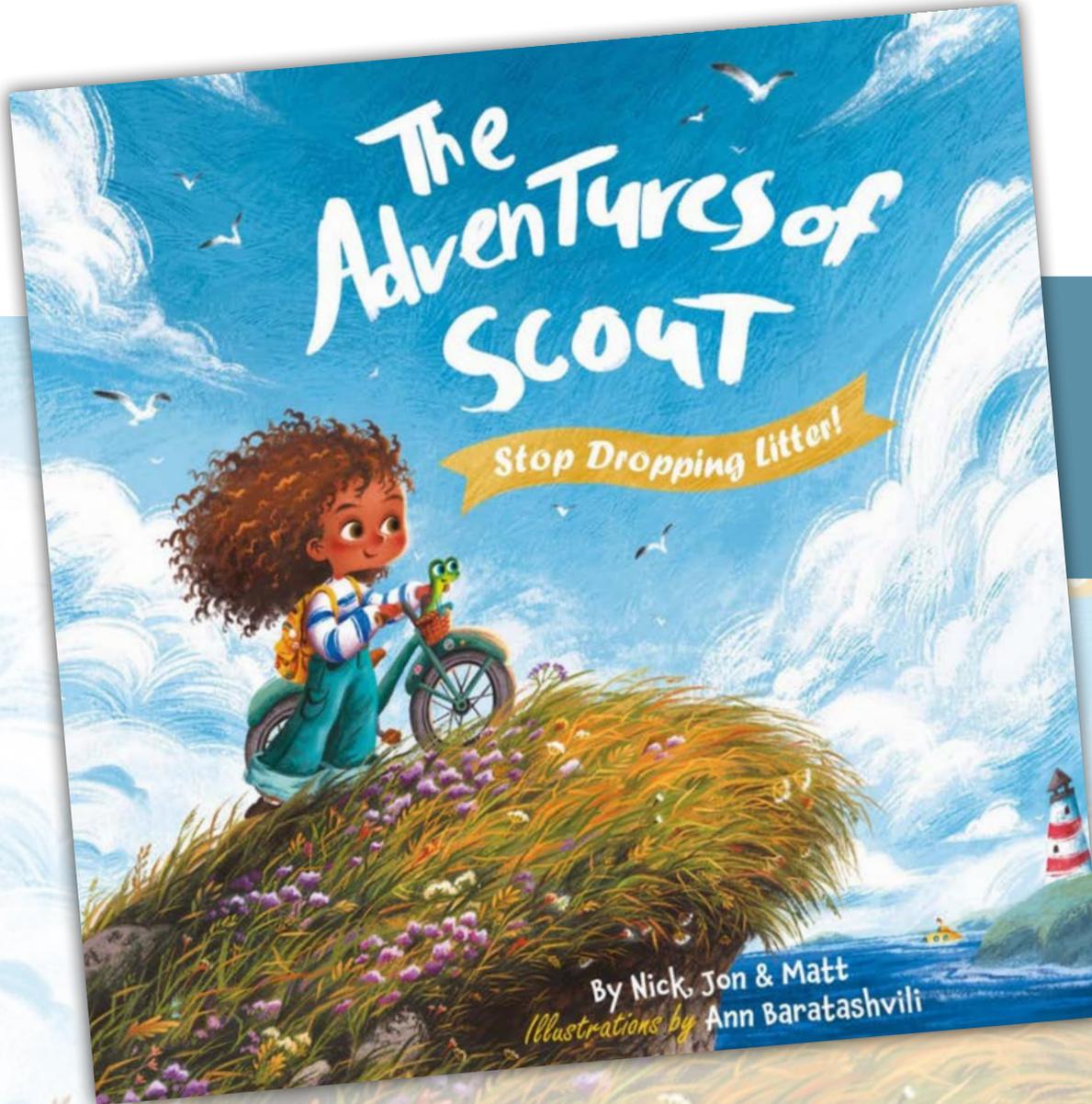




STEM By The Book

The Adventures of Scout – *Stop Dropping Litter* Nick, Jon and Matt



Experiences and Outcomes

I explore everyday materials in the creation of pictures/models/concepts. **TCH 0-10a**

Throughout all my learning, I take appropriate action to ensure conservation of materials and resources, considering the impact of my actions on the environment. **TCH 1-02a**

In everyday activity and play, I explore and make choices to develop my learning and interests. I am encouraged to use and share my experiences. **HWB 0-19a**

I have the freedom to discover and choose ways to create images and objects using a variety of materials. **EXA 0-02a**

continued...

The Adventures of SCOUT

Stop Dropping Litter



Experiences and Outcomes

...continued

Working on my own and with others, I use my curiosity and imagination to solve design problems. **EXA 0-06a**

I can use exploration and imagination to solve design problems related to real-life situations. **EXA 1-06a**

I can develop and communicate my ideas, demonstrating imagination and presenting at least one possible solution to a design problem. **EXA 2-06a**

Through creative play, I explore different materials and can share my reasoning for selecting materials for different purposes. **SCN 0-15a**

Through exploring properties and sources of materials, I can choose appropriate materials to solve practical challenges. **SCN 1-15a**

I can talk about science stories to develop my understanding of science and the world around me. **SCN 0-20a**

I have contributed to discussions of current scientific news items to help develop my awareness of science. **SCN 1-20a**

By investigating floating and sinking of objects in water, I can apply my understanding of buoyancy to solve a practical challenge. **SCN 2-08b**

Resources

Selection of empty and cleaned plastic bottles of varying sizes, cardboard tubes, yoghurt pots, packing materials, string, card, foam, boxes, rubber bands, magazines or newspapers, plastic bags, egg cartons and anything else you can find that could be reused and repurposed.

Activities

The Adventures of Scout – Stop Dropping Litter - is a great rhyming book that highlights the issues we face when litter is not disposed of correctly. The book focusses on a beach area, however, not all nurseries, schools or education settings have access to a beach so it is just as important for the learners to investigate their own local surroundings and neighbourhood to talk about the implications dropping litter can have on their environment and the animals that live in these areas.



Discussion opportunities

Take the learners on a local walk and take photographs of areas where dropped litter appears to be gathering. What types of materials is the litter made from?

Are the learners aware of recycling and what it means? This could lead to an opportunity to become an eco school.

Health and Safety Advice – always check an outdoor area before you go out with learners. Do not touch or collect litter without the appropriate protective equipment.

Talk to the learners about how long it takes for different materials to decompose/break down. Invite a local STEM Ambassador in to talk to the learners about their job in a recycling centre .

Building a model from junk that will float on water

Challenge the learners to build a raft/boat that will float on water. The boat should float unsupported. Can the vessel be loaded with cargo?

Encourage the learners to describe their design and explain why they chose the materials. Could they improve the design by replacing certain parts of their boat with other materials?



Examples of some Junk Model Boats



Challenge

Dependent on the age and stage of the learners you can vary the level of challenge you provide for this activity. The range of items you provide could make it easier or more challenging for the learners to complete the construction of their floating vessel.

This activity could challenge the learners to extend their investigation of floating and sinking. Learners working at 2nd level CfE could have a selection of straws, kitchen foil and other small loose parts - allowing them to embark on an engineering focussed activity whereby planning, creating, testing, changing and evaluating will challenge their creativity and imagination. This type of challenge also links to forces - in particular balanced and unbalanced forces

Helpful videos

Floating and sinking, density and surface area

CLICK HERE FOR SOME HELPFUL VIDEOS

Additional links to learning:

Investigating the natural world: How do aquatic animals change their position in the water?

Engineering: Make a paddle boat

[Titanic Investigations | Primary Science Teaching Trust \(pstt.org.uk\)](http://pstt.org.uk)

Find out how submarines surface and submerge.

[STEM: The Titanic Detective Agency](#)

