

Hook:
Treasure map (consolidating map skills from previous topic)
Different objects at the locations that link to the story/science


Alchemy Island
Focus: Science / Music


Knowledge:

- What is a solid?
- What is a liquid?
- What is a gas?
- How can you separate mixtures?
- How can you recover a substance from a solution?
- Which changes are reversible? Why?
- Which changes are not reversible? Why?
- How does the pitch and tempo effect the mood of a piece of music?
- What is a graphic score?
- Can you name 5 classical composers?
- How can you record the pieces of music you compose?
- How can you upload the pieces of music you create onto a laptop?

Learning Journey:
Recap prior learning and vocab for all Materials science taught so far (chemistry)

Science: Experiment 1: Compare and group materials (sand, copper, compost and cornflour, ball bearings, jelly marbles, ferro fluid) Testing for hardness, transparency, magnetism, electrical conductivity, thermal.

Learning Journey:
Science: Experiment 2: Separating materials form water - salt, oil, aquarium gravel using sieving , evaporating and filtering.

Science 3: Solubility of ingredients. Research vocabulary (recapping prior learning), add ingredients to water until no more can dissolve . Discuss particles and saturation and why. Sand, sugar, coffee, rice.

Learning Journey:
Music 1: Listen to different types of high quality music. Begin with 10 pieces (previously listened to in assembly - challenge children to remember composers and titles) then listen to composed and recorded music / computer created music and consider tempo, mood, pitch etc and the effects those have on the listener.

Vocabulary:

Buoyancy	Pitch
Materials	Dynamic
evaporating filtering	Rhythm
sieving	Graphic score
melting dissolving	Composition
reversible	Tempo
hardness, solubility	Composer
transparency	Mood
conductivity	Garage band
solution	

Learning Journey:
Music: Graphic scores. Introduce scores (recap previous boxing up technique) and extend through use of levelled lines to show pitch, volume etc. In groups compose with instruments and garage band and explore how to create mood, Record either using instruments, garage band or a mixture for use on their game.

Characteristic foci:
Creativity / respect

Skills:

- Compose a piece of music as part of a group
- Draw a graphic score.
- Evaluate a piece of music
- Explain how the instruments/pitch/tempo have created a certain mood
- Use appropriate vocabulary
- Select instruments for effect
- carrying out tests to answer questions
- Make predictions
- Present information
- Fair test
- observe and compare the changes that take place
- taking measurements

Curriculum Coverage:

1)know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution, 2)use knowledge of solids, liquids and gases to decide how mixtures might be, separated, including through filtering, sieving and evaporating, 3) give reasons, based on evidence from comparative and fair tests, for the particular, uses of everyday materials, including metals, wood and plastic, 4) demonstrate that dissolving, mixing and changes of state are reversible changes, 5) explain that some changes result in the formation of new materials, and that this kind, of change is not usually reversible, including changes associated with burning and, the action of acid on bicarbonate of soda,

compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets

Working Scientifically skills

appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians

improvise and compose music for a range of purposes using the inter-related dimensions of music

Learning Journey:
Application: Create computer game using previously taught Scratch skills and upload relevant recorded sounds onto Scratch and insert them to appropriate times.

Trip / Visitor:

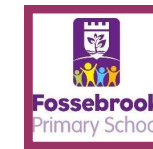
Display Plan:
Photos from experiments
Graphic Scores

Outcome:
Make the computer game on scratch and use their recorded sounds throughout to set the mood



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What do they already know?

Year 1

- What different materials are there?
- Can you describe...?
- What is this object made of...?
- Name a variety of everyday materials
- Which materials are waterproof?
- What materials can be found around the classroom/ school/ outside?
- What sounds are high/low?
- How can I play an instrument quieter or louder?
- How can we use instruments to represent, moods, feeling, events?

Year 2

- What is a mixture?
- What is a material?
- How many different materials can you name?
- What everyday materials would be suitable to build a castle?
- What does the material need to have?
- What are the 4 categories that instruments are organised in to?
- What is a beat?
- What is a note?
- What is a rhythm?
- How can we make music using our body?
- What is an untuned instrument?
- What is a tuned instrument?
- What is the difference between live and recorded music?
- What is a conductor?
- What is a composer?

Year 3

- What are magnets?
- Which materials will magnets attract?
- Do objects need to touch for forces to have effect?
- Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials
- What does compose mean?
- What are some metal instruments?
- What can I do to change the sound they make?

Year 4

- What is a solid, liquid and gas?
- What are the states of matter?
- What happens to materials when they change state?
- What is the temperature where materials change state?
- What is evaporation?
- What is condensation?
- What part does evaporation and condensation play in the water cycle?
- What effect does temperature have on evaporation?
- What are different musical notations?
- What is composing music?
- How do you compose music?

How will they remember it?

Mini Quizzes

Add to Kaboom pot

Reading texts around the subject (links to English / GR)

Display

Memorable experiments with clear conclusions

Which resources will I need?

Coffee filters

Sand

Bottles

Copper

Compost

Corn flour

Ball bearing

Jelly marbles

Thermochroic sheets

Ferro fluid

Garage band

Treasure map around school

What do I need to know to be able to teach this?

Which materials meet the experiment criteria?

How to use garage band

How do upload recordings to the server

How to set up and conduct fair tests