

## Impact statement: Science



### Provide enriching experiences

- Practical investigations
- Hands on approach: build, explore, feel, question
- Outdoor learning
- Links to real life situations
- One school trip a year to be science related - if viable

### Develop resilient individuals

- Enquiry based learning: Pattern seeking, Research, Fair Testing, Identifying & Classifying, Observation over Time
- Child led lessons
- Open questioning
- Children are given opportunities to test out their own theories
- Children are shown how and allowed to handle scientific equipment
- Children are encouraged to question why or why not, backing up their thoughts and ideas with reasons

Example misconceptions	How they are addressed
All things are either wood or metal	<ul style="list-style-type: none"><li>• Practical investigations</li><li>• Group discussion</li><li>• Concept Cartoons or annotated drawings used to raise awareness that alternative ideas exist and promote discussion of alternative viewpoints</li></ul>
Material is cloth or fabric	
Animals are four legged and furry	
Mist is steam	
Melting is the same as dissolving	
Large objects fall faster than small ones	

Larger is heavier, smaller is lighter	<ul style="list-style-type: none"> <li>• Created opportunities to compare some of the common misconceptions to the scientifically accepted explanations</li> <li>• Refer back to prior learning</li> </ul>
Shadows can occur between Sun and object	
Scientific meanings of familiar words such as "field" and "random", which have a different meaning in everyday life.	

### Promote ambitious mind-sets

- **Assessment**
- Children are taught to back up predictions with their reasoning
- Promotion of the fact that science takes us in all sorts of directions and it is ok for our predictions to not match our results

### Develop responsible citizens

- Sticky knowledge reviewed
- Eco links
- Cross curricular opportunities such as debate or persuasive letters regarding amount of plastic wastage in schools/oceans through English lessons, applying scientific knowledge.
- Health & Safety

### Provide a nurturing and safe environment

- Children are regularly given time, opportunities and space to use scientific equipment.
- Children are encouraged and referred back to question stems: What would happen if...? How about...? I wonder if...?

Link to PATHS:

- All feelings and ideas are ok.
- Collaborative working - Leader, Gatherer, Recorder, Reporter
- Problem solving - plan, test, review
- Growth Mindset

Develop creative thinkers

- Anything can be tested!
- Children steer their own learning
- Children have regular debates and discussions