Term: Autumn 1 2021-22 LKS2 year 3/4

Learning Challenge Question: Can you feel the force?

WOW – Magnetic fishing

Week 1:

What can I remember?

What do I want to find out?

Week 2: What happens when it is slippy?

1.I can plan a fair test

2. I can collect data by measuring

Week 3: What happens when it is slippy?

3. I can present my data in a table

4. I can answer questions about my findings (including evaluating investigation)

Week 4: Do opposites attract?

1.I can classify materials as magnetic or non-magnetic using a magnet

2.I can describe the relationships between the magnetic poles

Week 5: Will the game show the right answer?

1. I understand how a lever works

2. I can design a game that uses a lever and a magnet.

Week 6: Will the scoreboard show the right answer?

3. I can use my design to make a game

4. I can evaluate my design and my game.

Week 7: Can we do Lego

Lego We Do

1. I can follow a sequence of instructions to build the various models for LEGO We Do.
2. I can design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems.

Week 8: Reflection

Links and skills

Science Knowledge:

LKS2 Forces and Magnets

- compare how things move on different surfaces
- notice that some forces need contact between two objects, but magnetic forces can act at a distance
- observe how magnets attract or repel each other and attract some materials and not others
- 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
- describe magnets as having two poles predict whether two magnets will attract or repel each other, depending on which poles are facing.

Science Skills:

- I can raise my own and other relevant questions about world around me.
- I can begin to make my own decisions about the most appropriate types of scientific enquiry.
- I can set up simple fair test.
- I can look for patterns and relationships.
- I can collect and record data from my own observations and measurements.
- I can present data in tables and bar charts.
- I can draw simple conclusions and answer questions.
- I can use relevant simple scientific language to discuss ideas and communicate findings.
- I can identify new questions arising from collected data.

DT Technical Knowledge:

- understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- apply their understanding of computing to program, monitor and control their products.

DT Skills:

- I can generate ideas for an item, considering its purpose and the users.
- I can make labelled drawings from different views showing specific features.
- I can develop a clear idea of what has to be done.
- I can plan how to use materials, equipment and processes.
- I can select appropriate tools and techniques for making my product.
- I can measure, mark out, cut and shape arrange of materials, using appropriate tools, equipment and techniques.
- I can identify criteria that can be used for my own designs.
- I can evaluate my work both during and at the end of the assignment.
- I can evaluate products carrying out appropriate tests.