Separate Science - Chemistry - Key Stage 4

C10 Using Resources

Rusting





Independent task -Recall questions

Answer the following questions:

- 1. What is corrosion?
- 2. What is needed for rusting to occur?
- 3. What is the equation for rusting?
- 4. What can happen to iron products as a result of corrosion?
- 5. In a rusting experiment, why would a test tube which has an iron nail, air and no water also contain calcium chloride?

2

Independent task - Recall questions

Answer the following questions:

- 1. List 4 ways in which rusting can be prevented
- 2. What is meant by galvanised?
- 3. Which metal is more reactive zinc or iron?
- 4. Name an alternative metal which could be used as sacrificial protection instead of zinc
- 5. What happens in terms of electrons during oxidation?

3

Independent task - interpreting data

| Test tube | Mass of nail in grams | Mass of nail after 7 days in grams | Answer the following questions: |
|---|--------------------------|---------------------------------------|--|
| 1 - Iron nail + water | 8.5 | 8.95 | Which nail most increased in mass? Which nail/s didn't increase in mass? Explain why the nail in test tube 2 didn't increase in mass By how much did the nail in test tube 4 increase in mass? Explain why the nail in test tube 4 didn't increase in mass |
| 2 - Iron nail + dry air | 8.45 | 8.45 | |
| 3 - Iron nail + boiled water + oil | 8.51 | 8.51 | |
| 4 - Painted iron nail + scratch + water | 9.4 | 9.52 | |