Welcome to the Yorkshire Air Museum!
By coming to the Museum today you will have already achieved part of your Air Activities to earn a Stage 2 Badge! Use this worksheet to help you complete the rest.

In this worksheet, you will:
- Look at the dangers involved in visiting an airfield.
- Identify six airlines and their markings.
- Name and identify the main parts of an aeroplane.
- Name and identify different types of aircraft.
- Explain how different weather conditions can affect air activities.

I. Airfield Safety – Know the dangers involved in visiting an airfield.

The Yorkshire Air Museum is located next to an active airfield.
Have a go at the following questions about airfield safety.

While you walk around the Museum look across at the airfield. What can you see that divides the Museum from the airfield?

Answer: A FENCE

Why do you think it is there?
Answer: TO PREVENT UNAUTHORISED ACCESS TO THE AIRFIELD

Look at the pictures above. Underneath each picture, write down why you think it could be Dangerous for someone flying an aircraft?
Look at the pictures below. Underneath each picture, write down why you think it could be a danger for someone standing on the airfield?

**Runways**

**Answer:** Crash

**People being run-over**

………………………………

**Foreign Objects**

**Answer:** Damage to the engine

**Damage to the tyres of the plane**

**Structure damage**

**Smashed windscreen**

**Birds**

**Answer:** Birds could be sucked into the engine

**Cables and Hoses**

**Answer:** Damage to cable; slips, trips and falls.

**Fuel**

**Answer:** Fuel spill ignites;

**Aircraft catches fire;**

**Burns from petrol**

**Propellers**

**Answer:** Injury from blade

**Knocked over by the blast;**

………………………………

**Hit by debris thrown by the propeller.**

………………………………

**Moving Aircraft**

**Answer:** Injury or death

………………………………

**Jet Engine: Intakes/ Jet Pipes**

**Answer:** Knocked over by the blast from the engine

**Sucked into the intake**

**Ejection Seat**

**Answer:** Injury from flying canopy; injury/death from seat firing
II. **Aeroplane Parts — identify the main parts of an aeroplane**

Label the aeroplane drawing below, inserting the part names. You can use the definitions below for help.

- **WING**
- **LANDING GEAR/UNDERCARRIAGE**
- **ELEVATOR**
- **COCKPIT**
- **FUSELAGE**
- **JET ENGINE**
- **FLAP**
- **RUDDER**
- **CABIN**
- **NOSE**
- **FIN**

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The **COCKPIT** is where the pilot sits.

The **CABIN** is where the passengers sit.

The **FIN** is the upright fixed wing on the tail. It helps the pilot keep the aeroplane going in the right direction.

The **RUDDER** is a flexible part underneath the fin and is used to help the pilot steer left or right.

The **WINGS** are on each side of the plane. They lift the plane when flying and keep it in the air.

The **FUSELAGE** is the body of the aircraft.

The **NOSE** is the front of the plane.

The **TAIL** is at the very back of the plane.

The **AILERON** is a flexible part on the edge of the wing. It bends and helps the plane tilt from one side to the other which makes the plane go left or right.

The **LANDING GEAR**, also called the undercarriage is made up of a set of wheels for travel on the ground.

The **JET ENGINE** gives the power to the plane.

The **FLAPS** are flexible parts on the wing which move to generate extra lift on the wing for take off and landing.

The **ELEVATOR** is a flexible part on the back of the tail which helps the pilot go up and down.
III. Types of Aircraft - identify different types of aircraft

Identify each category of aircraft below. Under each picture, write the name of two aircraft you can find at the Yorkshire Air Museum.

The first one has been done for you!

**Category: a helicopter**
1. Skeeter 
2. Dragonfly

**Category:**
1. **Lightning/Harrier/Mirage**
2. **Tornado/Buccaneer/Hunter**

**Category:**
1. **The Museum does not have one of these planes on display.**

**Category:**
1. **R100**
   (Small model in Building 4)

**Category:**
1. **Spitfire/ME109/Gannet**
2. **Hurricane/Argos/Auster**

**Category:**
1. **Devon**
2. **Herald**

**Category:**
1. **BE2/AVRO 504/Kitten**
2. **SESA/Wright Flyer**

**Category:**
1. **WACO / Cayley Glider**
2. **Sligsby**
IV. Civil Aircraft

The first letter of the Marking on a civil aircraft stands for the country it comes from. The table below shows a selection of different countries and their codes.

<table>
<thead>
<tr>
<th>Nationality</th>
<th>Code</th>
<th>Nationality</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>B</td>
<td>Netherlands</td>
<td>PH</td>
</tr>
<tr>
<td>Germany</td>
<td>D</td>
<td>Greece</td>
<td>SX</td>
</tr>
<tr>
<td>Spain</td>
<td>EC</td>
<td>Sri Lanka</td>
<td>4R</td>
</tr>
<tr>
<td>Eire (Ireland)</td>
<td>EI</td>
<td>Italy</td>
<td>I</td>
</tr>
<tr>
<td>France</td>
<td>F</td>
<td>New Zealand</td>
<td>ZK</td>
</tr>
<tr>
<td>Great Britain</td>
<td>G</td>
<td>Kenya</td>
<td>5Y</td>
</tr>
<tr>
<td>USA</td>
<td>N</td>
<td>United Arab Emirates</td>
<td>A6</td>
</tr>
</tbody>
</table>

Now find the correct nationality for each of the registration codes below.

<table>
<thead>
<tr>
<th>Aircraft Registration Code</th>
<th>Nationality</th>
</tr>
</thead>
<tbody>
<tr>
<td>5Y– KQX</td>
<td>Kenya</td>
</tr>
<tr>
<td>SX-DYC</td>
<td>Greece</td>
</tr>
<tr>
<td>4R-ALA</td>
<td>Sri Lanka</td>
</tr>
<tr>
<td>B-2557</td>
<td>China</td>
</tr>
<tr>
<td>D-AIPS</td>
<td>Germany</td>
</tr>
<tr>
<td>EC-GRI</td>
<td>Spain</td>
</tr>
<tr>
<td>ZK-NCC</td>
<td>New Zealand</td>
</tr>
</tbody>
</table>

Airlines have their own markings so that they can be easily identified. Here are some of the airline logos you might recognise. You can look at work airline tail logos on the following site: https://airlinetaillogos.wordpress.com/
Now look at the following six pictures below of airline tail logos and label them with the correct airline name and nationality. You might like to test each other using your own collection of pictures, photographs or postcards.

Airline: **Alitalia**  
Nationality: **Italy**  

Airline: **Iberia**  
Nationality: **Spain**

Airline: **Lufthansa**  
Nationality: **Germany**  

Airline: **KLM**  
Nationality: **Netherlands**

Airline: **Qantas**  
Nationality: **Australia**

Airline: **Air France**  
Nationality: **France**

V. **Weather Conditions and Air Activities – How different weather conditions can affect air activities**

Look at the statements below and choose how they affect planes. Cross out the two incorrect answers for each statement and draw one or two weather symbols, taken from the bottom of the page to show what kind of weather would create the conditions for each statement.

<table>
<thead>
<tr>
<th>Ice forms on the aircraft</th>
<th>What is the effect?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. The wheels freeze to the runway.</td>
</tr>
<tr>
<td></td>
<td>2. The ice affects the weight and balance of the aircraft.</td>
</tr>
<tr>
<td></td>
<td>3. The fuel freezes.</td>
</tr>
</tbody>
</table>

![Weather symbols]
Perfect weather for gliding

1. Warm air thermals help lift the glider up.
2. The glider uses less fuel.
3. The pilot does not get cold.

Poor visibility—it is difficult to see

1. Cabin crew cannot see to serve drinks.
3. Gives the pilot eye strain.

Sudden changes in air pressure (turbulence)

1. Might make the aircraft go off course.
2. Wakes up the pilot!

VI. Talk to one of our Museum guides and ask him about his experiences when flying.

Write down your notes below:

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WELL DONE FOR COMPLETING OUR MUSEUM AIR ACTIVITIES!