# Unit 2.1 Algorithms; Lesson 2 – Linear and Binary Searches

**Activity 1**

**Cut out Support Cards**

Make sure the list is in order.

* Take the middle value
* Compare it to the value you are looking for
* IF it is the value you are looking for
  + Celebrate and stop
* ELSEIF it is larger than the one you are looking for
  + Take the values to the left of the middle value
  + Make them into a new list
* ELSEIF it is smaller than the one you are looking for
  + Take the values to the right of the middle value
  + Make them into a new list
* REPEAT from 1 with the new list UNTIL you have checked and it is not in the list

Make sure the list is in order.

* Take the middle value
* Compare it to the value you are looking for
* IF it is the value you are looking for
  + Celebrate and stop
* ELSEIF it is larger than the one you are looking for
  + Take the values to the left of the middle value
  + Make them into a new list
* ELSEIF it is smaller than the one you are looking for
  + Take the values to the right of the middle value
  + Make them into a new list
* REPEAT from 1 with the new list UNTIL you have checked and it is not in the list

Make sure the list is in order.

1. Take the middle value
2. Compare it to the value you are looking for
3. IF it is the value you are looking for
   1. Celebrate and stop
4. ELSEIF it is larger than the one you are looking for
   1. Take the values to the left of the middle value
   2. Make them into a new list
5. ELSEIF it is smaller than the one you are looking for
   1. Take the values to the right of the middle value
   2. Make them into a new list
6. REPEAT from 1 with the new list UNTIL you have checked and it is not in the list

Make sure the list is in order.

1. Take the middle value
2. Compare it to the value you are looking for
3. IF it is the value you are looking for
   1. Celebrate and stop
4. ELSEIF it is larger than the one you are looking for
   1. Take the values to the left of the middle value
   2. Make them into a new list
5. ELSEIF it is smaller than the one you are looking for
   1. Take the values to the right of the middle value
   2. Make them into a new list
6. REPEAT from 1 with the new list UNTIL you have checked and it is not in the list

**OCR Resources**: *the small print*OCR’s resources are provided to support the teaching of OCR specifications, but in no way constitute an endorsed teaching method that is required by the Board, and the decision to use them lies with the individual teacher. Whilst every effort is made to ensure the accuracy of the content, OCR cannot be held responsible for any errors or omissions within these resources.   
© OCR 2016 - This resource may be freely copied and distributed, as long as the OCR logo and this message remain intact and OCR is acknowledged as the originator of this work.

OCR acknowledges the use of the following content:

Please get in touch if you want to discuss the accessibility of resources we offer to support delivery of our qualifications: [resources.feedback@ocr.org.uk](mailto:resources.feedback@ocr.org.uk)