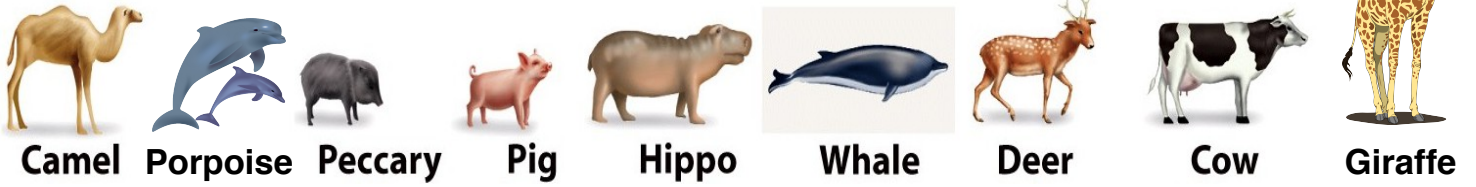



Name: \_\_\_\_\_ Block: \_\_\_\_\_ Date: \_\_\_\_\_

**WHALE DNA ACTIVITY**

Warm-Up: Put these species in order by how closely related to whales you think they are. Start with the MOST closely related and end with the LEAST closely related:



Cut out the DNA strips for each species. Carefully line them up and COUNT how many differences there are in the genetic code compared to the right whale. Record your findings on the chart to the right. 

Based off of this chart, which LAND animal are Right Whales most closely related to? What is your evidence. Explain in 2-3 sentences:

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	Differences compared to Right Whale genetic code
<b>Sperm Whale</b>	
<b>Porpoise</b>	
<b>Giraffe</b>	
<b>Hippo</b>	
<b>Cow</b>	
<b>Camel</b>	
<b>Deer</b>	
<b>Pig</b>	
<b>Peccary</b>	
<b>Rhino</b>	

# DNA SEQUENCES

Cut apart the 11 strips for aligning pairs and counting differences.

## 1: Right Whale

AATCCCCAAAGCTAAGGAGACTATCCTTCCTAAGCATAAAGAAATGCCCTTCCTATATC

## 2: Sperm Whale

AGTCCCCAAAGCTAAGGAGACTCTCCTTCCTAAGCATAAAGAAATGCCCTTCCTAAATC

## 3: Porpoise

AGTCCCCAAAGCTAAGGAGACTATCCTTCCTAAGCATAAAGAAATGCGCTTCCTAAATC

## 4: Giraffe

AGTCTCCAAAGTGAAGGAGACTATGGCTCCTAAGCACAAAGAAATGCCCTTCCTAAATA

## 5: Hippo

AGTCCCCAAAGCAAAGGAGACTATCCTTCCTAAGCATAAAGAAATGCCCTTCTCTAAATC

## 6: Cow

AGTCCCCAAAGTGAAGGAGACTATGGTTCCTAAGCACAAAGAAATGCCCTTCCTAAATA

## 7: Camel

TGTCCCCAAAACCTAAGGAGACCATCATTCCCTAAGCGCAAAGAAATGCCCTTGCTTCAGTC

## 8: Deer

AGTCTCCGAAGTGAAGGAGACTATGGTTCCTAAGCACGAAGAAATGCCCTTCCTAAATA

## 9: Pig

AGATTCCAAAGCTAAGGAGACCATTTGTTCCCAAGCGTAAAGGAATGCCCTTCCTAAATC

## 10: Peccary

AGACCCCAAACCTAAGGAGACCGTTGTTCCCAAGCGTAAAGGAATGTCCTCCCTAAATC

## 11: Rhino

AGTCTCCAAACCTAAGGAGACCATCTTTCCCTAAGCTCAAAGTTATGCCCTCCCTTAAATC

**1: Right Whale**

AATCCCCAAAGCTAAGGAGACTATCCTTCCTAAGCATAAAGAAATGCCCTTCCTATATC

**1: Right Whale**

AATCCCCAAAGCTAAGGAGACTATCCTTCCTAAGCATAAAGAAATGCCCTTCCTATATC

**1: Right Whale**

AATCCCCAAAGCTAAGGAGACTATCCTTCCTAAGCATAAAGAAATGCCCTTCCTATATC

**1: Right Whale**

AATCCCCAAAGCTAAGGAGACTATCCTTCCTAAGCATAAAGAAATGCCCTTCCTATATC

**1: Right Whale**

AATCCCCAAAGCTAAGGAGACTATCCTTCCTAAGCATAAAGAAATGCCCTTCCTATATC

**1: Right Whale**

AATCCCCAAAGCTAAGGAGACTATCCTTCCTAAGCATAAAGAAATGCCCTTCCTATATC

**1: Right Whale**

AATCCCCAAAGCTAAGGAGACTATCCTTCCTAAGCATAAAGAAATGCCCTTCCTATATC

**1: Right Whale**

AATCCCCAAAGCTAAGGAGACTATCCTTCCTAAGCATAAAGAAATGCCCTTCCTATATC

**1: Right Whale**

AATCCCCAAAGCTAAGGAGACTATCCTTCCTAAGCATAAAGAAATGCCCTTCCTATATC

**1: Right Whale**

AATCCCCAAAGCTAAGGAGACTATCCTTCCTAAGCATAAAGAAATGCCCTTCCTATATC