Name:

Block:

Day 1 Worksheet

**Instructions**:

Based on what the activities done today, answer the following questions using complete sentences.

1. **Deep-learning** is a type of *machine-learning* based on artificial *neural networks* in which multiple layers of processing are used to extract progressively higher-level *features* from data.

How do humans use ‘deep-learning’?

In the fake rock activity, what features did you use to understand that the fake rock was actually not a real rock?

1. In machine learning, a **feature** is an individual measurable property or characteristic of an *instance*. An **instance** is an object that a computer is trying to learn about.

* A dog wearing a lion garment

  Description automatically generated with medium confidenceHow might some features fail for some instances but works for others?
* How do we learn from failures?
* A cartoon of a person wearing a hat

  Description automatically generated with low confidenceWhy is it important to ask the right questions? For example, when asking whether this image is a cat, do we mean housecat or any animal from the cat family?
* When collecting a bunch of instances, why is it important to carefully define what instances you want to test and which you do not want to test?
* A person holding a dog

  Description automatically generated with medium confidenceSometimes changing the question is needed. Instead of asking if the picture *is* a cat, what should we ask instead?