**Blood Type Practice**

*Introduction: Your blood type is determined by the ABO system. The different blood types are A, B, AB, and O. There is also something called the Rh factor; If blood cells have it, they are Rh +, if your blood cells don’t have it, they are Rh-. This is what the + and – mean next to your blood type.*

1. Your blood type is genetically passed down to you from your parents. We can use Punnett squares to determine what the offspring’s blood type will be.

**A is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**B is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**O is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Another word for trait is **allele.** When you are born, you get one allele for blood type from your father, and one allele for blood type from your mother. What will the children look like if the mother is AO and the father is AB? (use the Punnett square)

% with A blood type:

|  |  |
| --- | --- |
|  |  |
|  |  |

% with B blood type:

% with AB blood type:

% with O blood type:

1. We can use Punnett squares in forensics to figure out the relationships between people. Solve this mystery: Mary has type AB blood and she has a baby who is also type AB. James has type O blood. Can James be the father of Mary’s child? (use the Punnett square)

|  |  |
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1. Susie has BB type blood and Andrew has O type blood. Could they have a child that has type O blood?

|  |  |
| --- | --- |
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|  |  |

**Watch the BrainPop clip. Answer the following questions:**

1. Why is it important to only put the same blood types together? (in other words, why shouldn’t we mix blood types?)
2. There are 2 kinds of markers in your blood. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cause immune responses, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; proteins that fight off invading substances.
3. Draw the pictures that go in this table:

|  |  |  |  |
| --- | --- | --- | --- |
| Blood Type | Red Blood Cell type | Antigens present | Antibodies present |
| A |  |  |  |
| B |  |  |  |
| AB |  |  |  |
| O |  |  |  |

1. People with Type O blood are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Donors. Why is this?
2. Look at the chart of + and – Rh factors. Can an Rh- person receive blood from an Rh + person?
3. Can an Rh + receive blood from an Rh- person?