**Mitosis Flip Book Rubric**

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| **CATEGORY** | **3** | **2** | **1** |
| **Interphase** | Nucleus is drawn. DNA appears as chromatin. | 1 structure is missing or drawn in an incorrect position | 2 or more structures are missing or drawn in an incorrect position |
| **Prophase**  | Nucleus is drawn as a dotted line to show the dissolving. DNA is shown as chromosomes. Spindle fibers and centrioles appear on one end of the cell | 1 structure is missing or drawn in an incorrect position | 2 or more structures are missing or drawn in an incorrect position |
| **Metaphase** | Centrioles are drawn at the poles (ends) of the cell. Chromosomes appear in a vertical line at the equator. Spindle fibers are attached to centromeres | 1 structure is missing or drawn in an incorrect position | 2 or more structures are missing or drawn in an incorrect position |
| **Anaphase** | Chromosomes are split and appear as chromatids. Spindle fibers are shortened. Centrioles are still present at the poles | 1 structure is missing or drawn in an incorrect position | 2 or more structures are missing or drawn in an incorrect position |
| **Telophase** | Spindle fibers, centrioles, and centromeres are dissolved. A nucleus is drawn in each new cell with a dotted line to represent reforming. DNA appears as chromatin. | 1 structure is missing or drawn in an incorrect position | 2 or more structures are missing or drawn in an incorrect position |
| **Cytokinesis** | Two independent cells with two nuclei and chromatin are present. | 1 structure is missing or drawn in an incorrect position | 2 or more structures are missing or drawn in an incorrect position |
| **Coloring and Neatness** | All drawings are neat, in color, and show consistency from one drawing to the next (same colors for the same structures) | All but 2 drawings are neat, in color, and show consistency from one drawing to the next (same colors for the same structures) | All but 4 drawings are neat, in color, and show consistency from one drawing to the next (same colors for the same structures) |
| **Transition Pictures (at least 5)** | All transitional pictures show the movement of structures from the phase prior to the phase after. Flipbook appears as a slow motion animation. | Most transitional pictures show the movement of structures from the phase prior to the phase after. Flipbook appears as a slow motion animation. | Some transitional pictures show the movement of structures from the phase prior to the phase after. Flipbook appears as a slow motion animation. |

Visit: <http://mrtranscience.weebly.com/resources-and-multimedia.html> for a sample flipbook in motion

Visit: <http://mrtranscience.weebly.com/documents.html> for the powerpoint instructions used during class.