SEARCHING FOR
A NEW MEDICINE
ACTIVITY BOOK

NAME: ______________
Biological and Human Scales

Molecular and cellular biology scales compared to human scales (approx 5 orders of magnitude per column)

### Human Scales
- 200 m
- 20 m
- 2 m
- 200 mm
- 20 mm
- 2 mm

### Biological Scales
- 2 mm
- 200 μm
- 20 μm
- 2 μm
- 200 nm
- 20 nm
- 2 nm

**Human Scale Key:** Aircraft Carrier (200m), 3-story House (20m), Human (2m), Liver/Gerbil (200mm), Lymph Node/Mosquito (20mm), Skin/Flee (2mm), Hair thickness (200um)

**Biological Scale Key:** Flee (2mm), Amoeba (200um), Eukaryotic Cell (20um), Mitochondria/Bacteria (2um), Centriol/Large Virus (200nm), Cell Membrane/Small Virus (20nm), dsDNA thickness (2nm)

by Eugene Douglass & Chad Miller - https://www.practicallyscience.com/intuiting-biological-scales-using-human-scales/#more-53
WHERE DOES LEISHMANIASIS OCCUR?

THE DRUG DISCOVERY PATHWAY

This pathway typically takes 10-20 years

WORDSEARCH

Find the following words in the puzzle.

- SANDFLY
- CHEMISTRY
- BLOOD CELL
- COMPOUND
- LABORATORY
- IMMUNE SYSTEM

- INFECTION
- KIRSTY
- EXPERIMENT
- LEISHMANIASIS
- MEDICINE
- NEGLECTED DISEASE

- PARASITE
- RESEARCH
- BIOLOGY
- TRANSMITTED
IMAGES OF A 96-WELL SCREENING PLATE

Colour all the wells that contain healthy cells with no parasite infection, IMAGE B in the KEY below.

KEY:

- IMAGE A: Infected cells plus parasites
- IMAGE B: Healthy cells but no parasites
- IMAGE C: Damaged cells with no parasites
- IMAGE D: No cells and no parasites