



Using Spatial Awareness to set Patterns During Mohs Tissue Processing

Marie Tudisco- HT (ASCP)

Target Audience- Novice

Spatial Awareness

The awareness of the body in space.

Knowledge of Objects in relation to Space.

Organized awareness of objects in the space around us.

Understanding objects when they change

Artistic creativity is linked to Spatial Awareness.

Develop Patterns

Keep it Simple

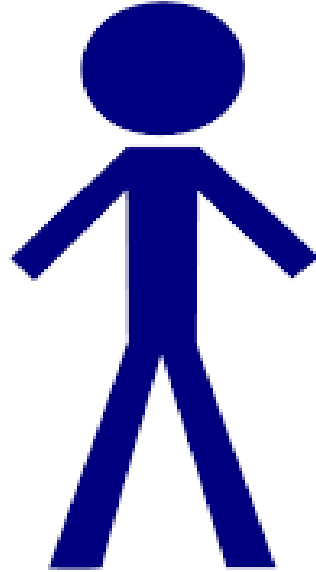
Use Common Sense

Eliminate Unnecessary steps that foster confusion and inhibit tracking

(ie., multiple color-coding), disorganization

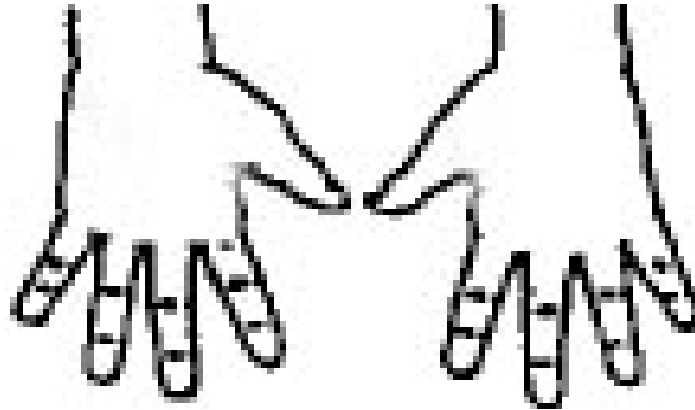
Start with yourself
Heads UP
Where am I ?

Anatomical
Position



HANDS DOWN

**Anatomic
position**



Developing Spatial Awareness - Using Colors

Look up

SKY BLUE EARTH RED



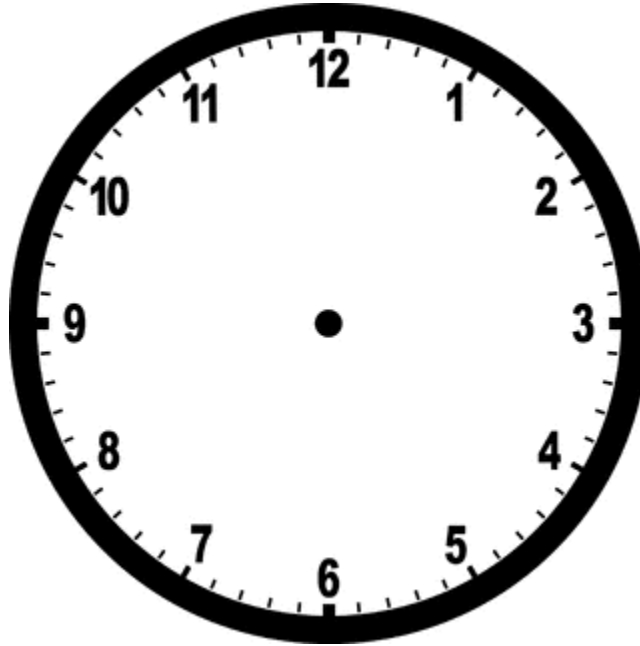
Different Colors- Images

DYES



Sunny Sky-----Green Grass

Using Objects- Clock



12 is UP

PENNY

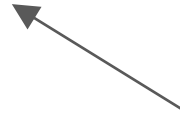
Heads



^

Rim

Tails



Flip

Objective

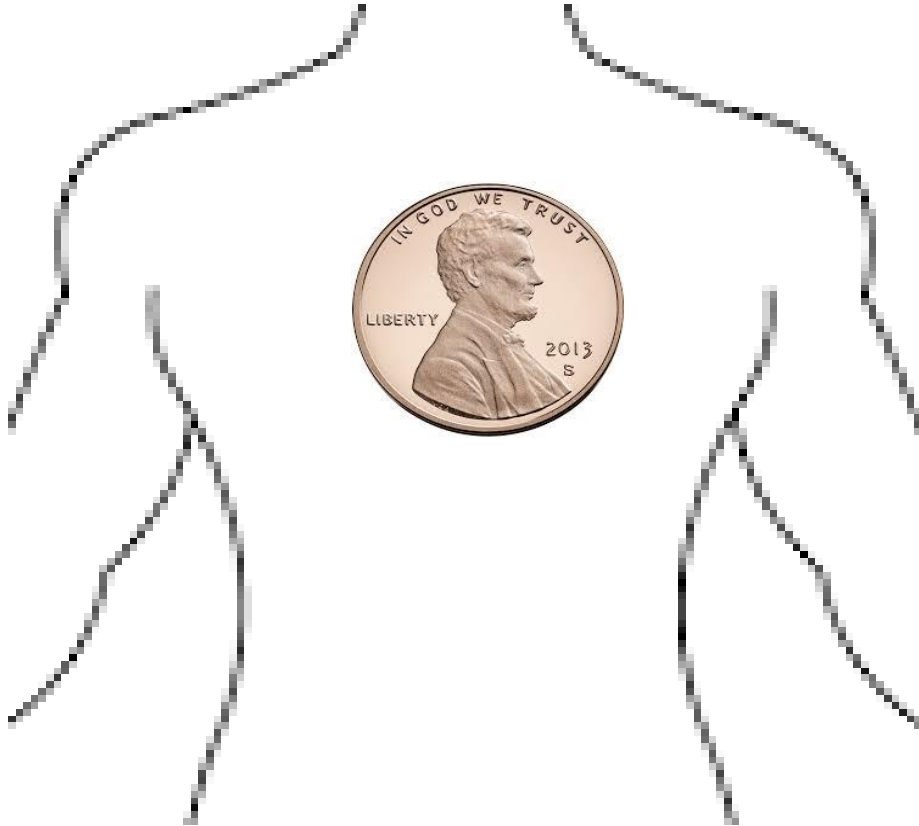
PRESERVE ORIENTATION

How?

Be Consistent

Tumor

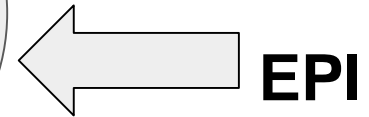
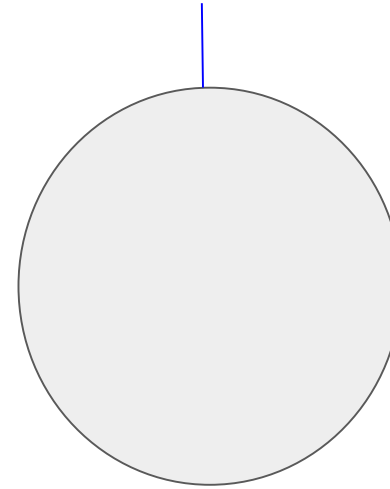
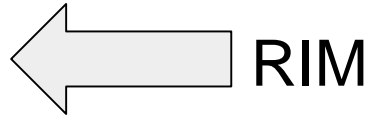
Heads Up 12 o'clock



12 o'clock

Heads/Tissue Surface

12



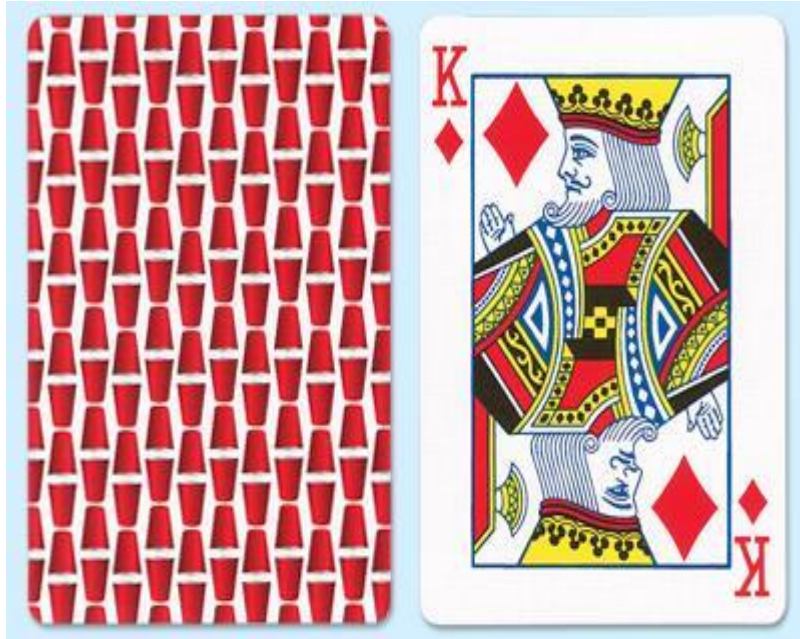
Q. where is the undersurface? A. Flip side (tails)

Q. where is the margin? A. rim (epi)

Visualization- Photographic Memory- Flip tissue over

Surface-smooth firm skin pattern

Undersurface-fleshy with various structures



Visual recall

Hone in on your photographic memory over time

Built-in skill that histotechs have to recall visual information

The angel on your shoulder

Says something doesn't look or feel right

Customized your preferences

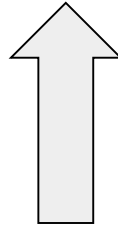
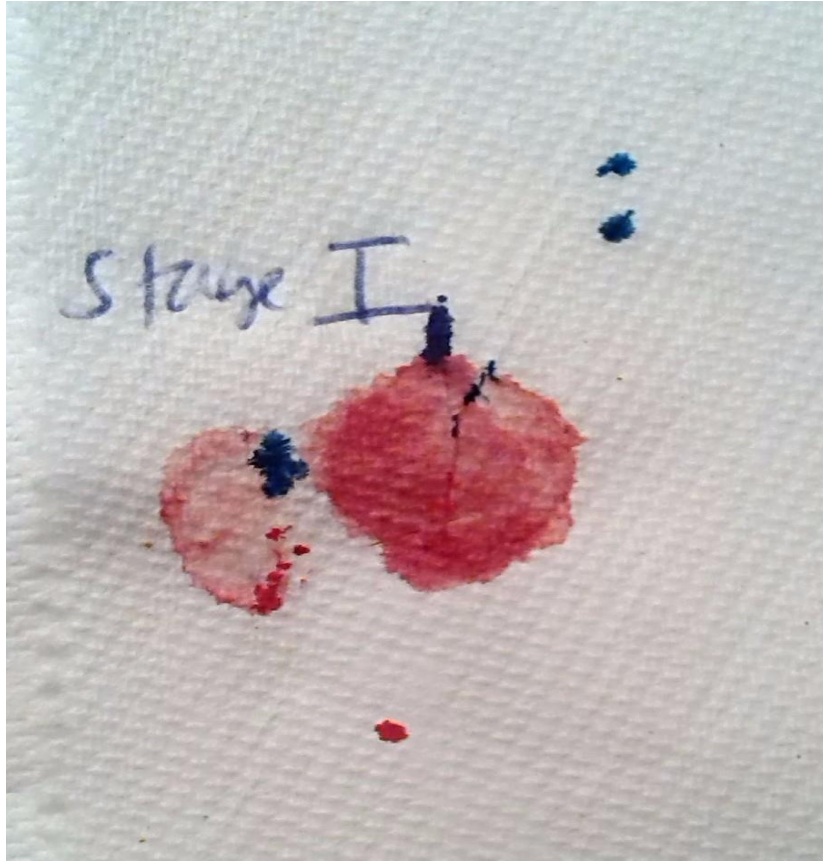
IMPRINTING

USING A PAPER TOWEL-Mirror Image



Tissue Orientation imprint on paper towel

Keeping a record of Dye Placement and Slice direction



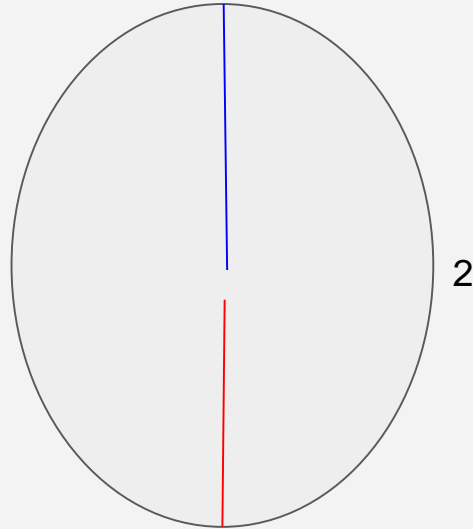
Color code-dyes

Vertical cut

Sky-blue

Earth-red

1



Superior- Supreme Blue Sky

Inferior- Lowly Earth

DYES-

Mapping Codes

BLUE

|

|

|

|

Dotted sky

RED

|

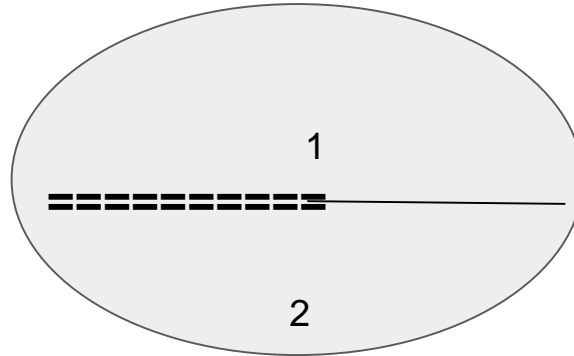
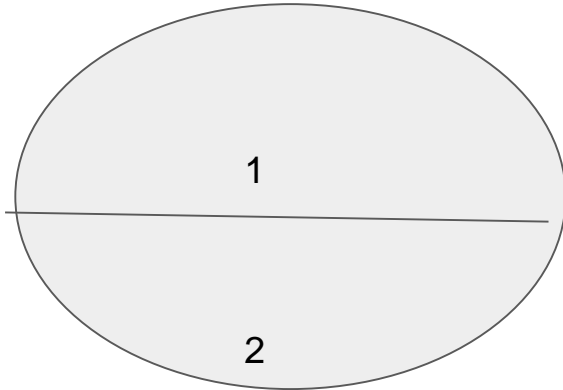
Solid Ground

Labeling top to bottom

Horizontal cut

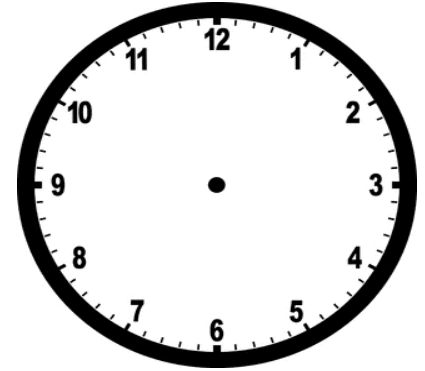
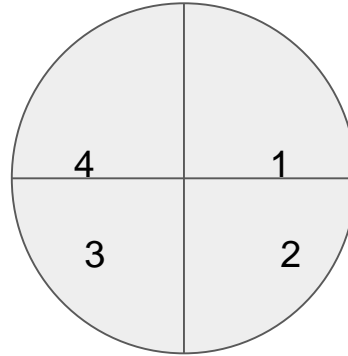
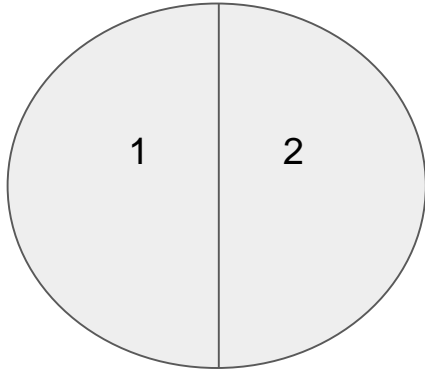
Superior to Inferior

Dye Direction L>>>R



Labeling Left to Right and clockwise- Using Direction

object



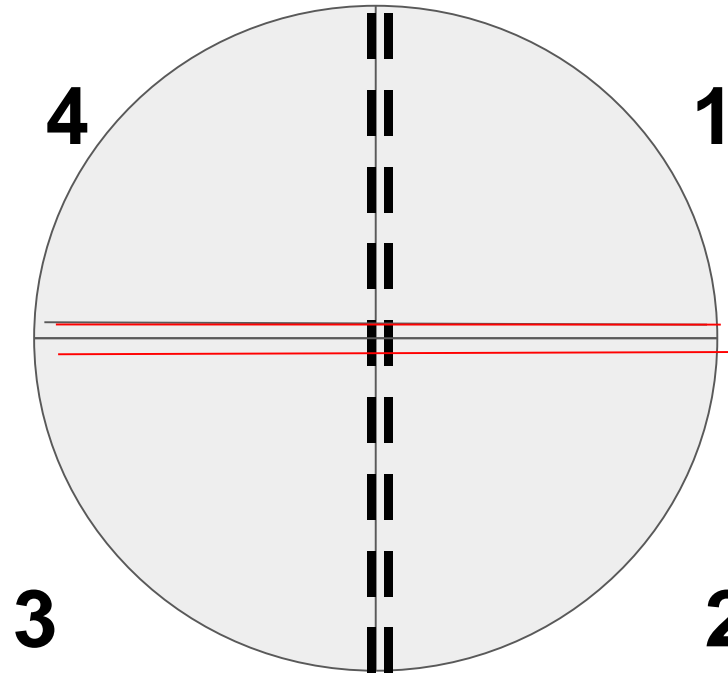
Dye Color match

Would you do this ?



Multiple sections

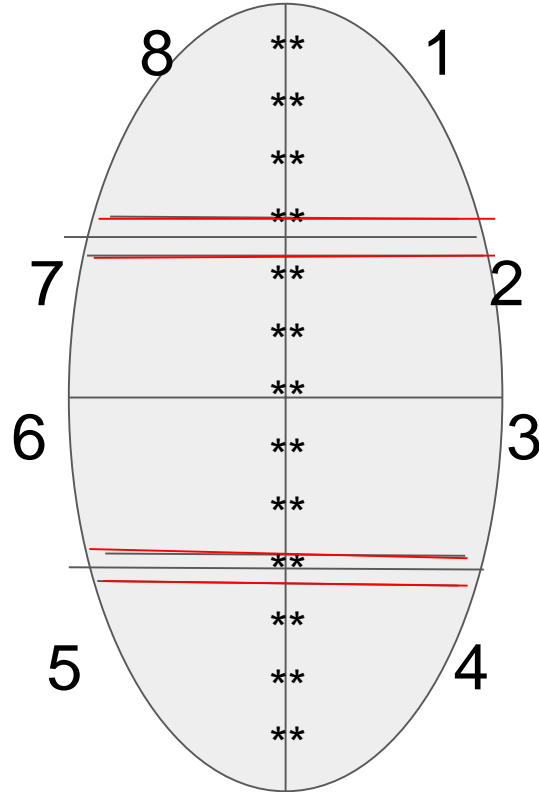
OPPOSITES MATCH



**Clockwise direction
Sequence match**

6+ sections- Match Dyes on Adjoining pieces

Connect dyes



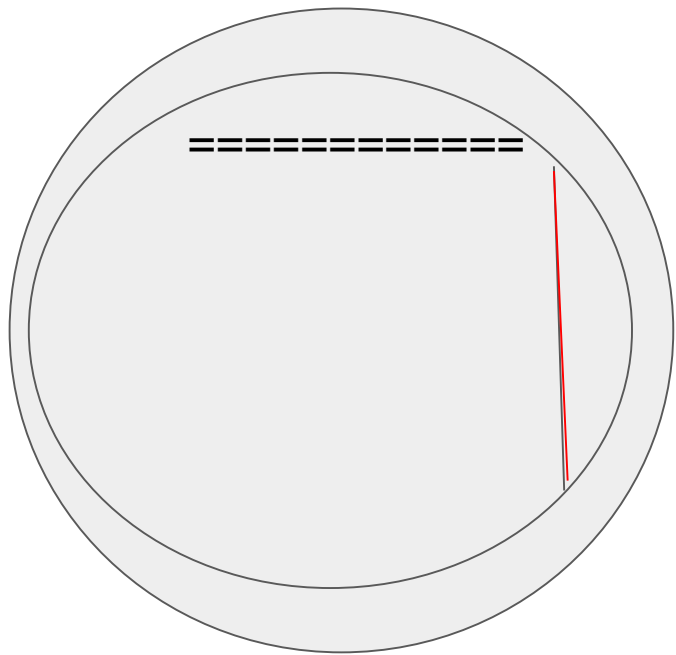
color match pairs

Are you aware?



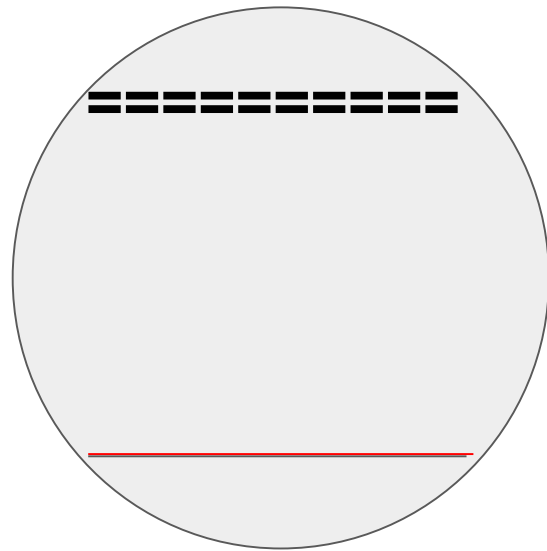
CONNECT THE DYES

Dyeing Sides without epi



Using 2 Dyes

WRONG



Back to the wall-right angle to sky-Never naked

Ascending Order- Climb a ladder



Starting from label down or bottom up

Positioning tissue on slide in sequence



Make a list

John Doe

1
2
3
4

Climb steps

Jane Doe

4
3
2
1

L>>>>>R

X

MICROSCOPE -THE REVERSE IMAGE



Why dyes are important



Depending on the microscope used, light microscopes and compound lens microscopes cause light to bend before reaching the lens and images may be reversed or inverted. Upside down and backwards.

Map-

Which eye is black?



YOURSELF LOOKING IN THE MIRROR

Which eye is black?



- **Objects seen under the microscope appear reversed/inverted**
- **Ignore this**
- **It is only important if you have to dissect tissue under the microscope**
- **As long as your dyes match your mapping, this is all the orientation you need to rely on.**

Follow your Map

**FOLLOW THE YELLOW
BRICK ROAD**



Getting Lost- Sometimes we can lose Direction



Tools- Help is available - GPS Camera



Take a Photo



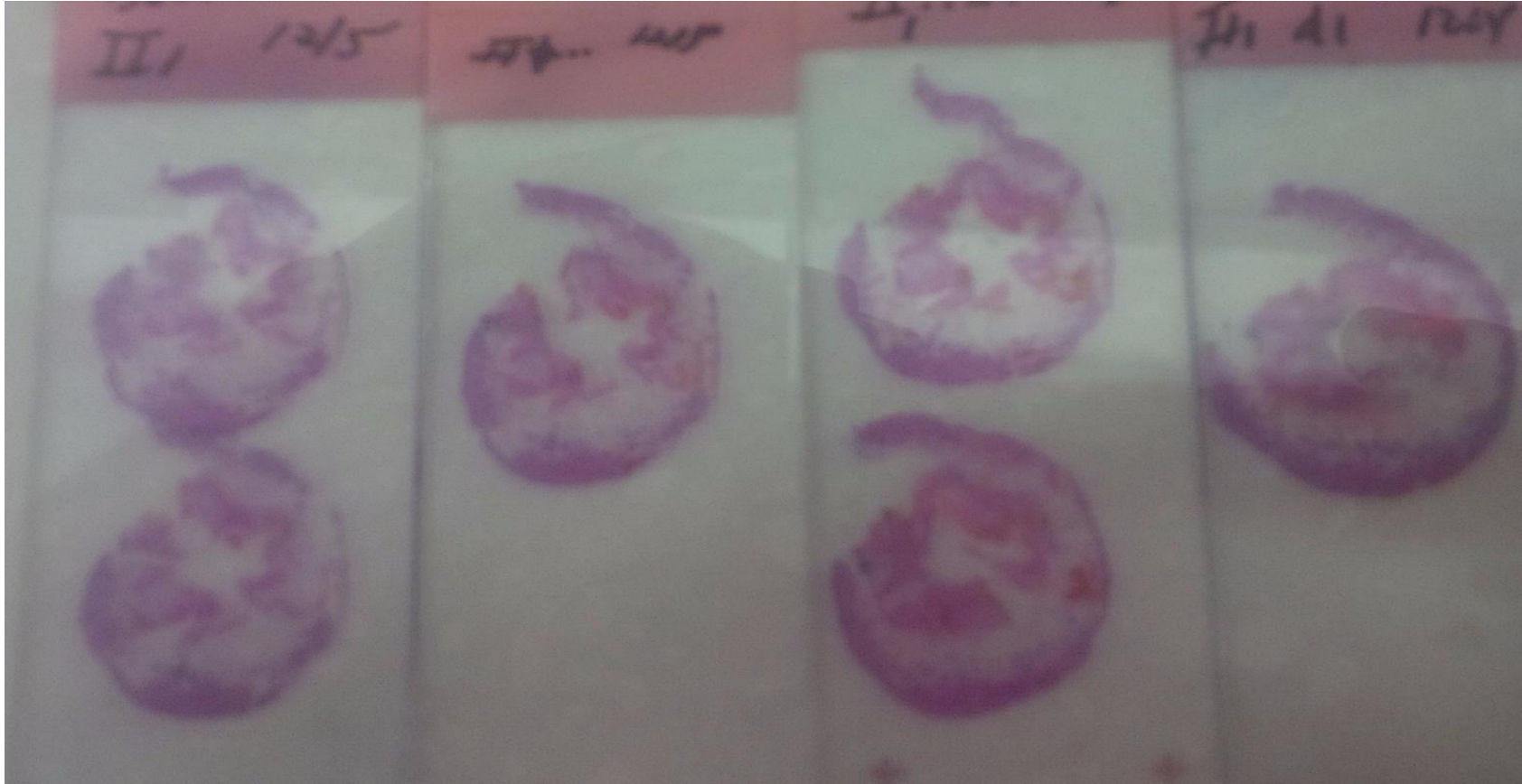


Detached disconnected piece





Bring your camera to the microscope screening



Shop tip- RELEVANCE

**When using Spatial Awareness to
Develop patterns, present as much
info as needed and as little as
required.**

REFERENCES

Images

Google.com

<http://lincolnpennies.net/>

<https://drawception.co>

<http://pictogram-free.com/46-play/186-play.html>

<http://www.freepik.com/free-photos-vectors/stairs>

http://etc.usf.edu/clipart/48400/48481/48481_nclockb.htm

<http://hollidayinvestigations.com/fingerprinting/> <http://www.ciphr.com/blog/5-techniques-to-supercharge-your-productivity/> [http://www.wikihow.com/Write-With-Your-Left-Hand-\(if-Right-Handed\)](http://www.wikihow.com/Write-With-Your-Left-Hand-(if-Right-Handed))

<http://www.clipartbest.com/blue-stick-figure>

<http://photosof.org/green-grass-and-yellow-sky/>

<http://www.amazon.com/MisMatch-Patriotic-American-Stars-Stripes/dp/B00TJ9QCGE>

References cont.

<http://www.saveonphone.com/wp-content/uploads/2014/04/bigstock-Smartphone-camera-phone-taking-52387939-e1398270011808-605x358.jpg>

<http://www.clker.com/cliparts/q/2/y/l/M/d/black-eye-smiley-hi.png><http://kathyweckwerth.com/wp-content/uploads/2016/05/yellow-brick-1024x576.jpg>

<http://www.everymilesamemory.com/Images%205/confused%20map.jpg>

<http://webmedia.jcu.edu/juhan/files/2015/05/Directional-Signs-2.jpg>

Acknowledgement: Barbara Strippoli

