Hydrosphere Investigation
Data Sheet

School name: _____ Class or group name: _____

Name(s) of Student(s) collecting data: _____

Measurement Time: *****
Year: _____   Month: _____   Day: _____   Time: __:__ (UT)   Time: __:__ (Local)

Name of Site : _____

Water State: (check one) *****
❏ Normal   ❏ Flooded   ❏ Dry   ❏ Frozen   ❏ Unreachable
   Note: If Normal is selected, continue below; all other selections stop here

Transparency

Enter data below, depending on whether you are using the Secchi Disk or the Transparency Tube method.

Secchi Disk
Secchi Disk Test 1:
Distance from observer to:

to water surface _____ m

where disk disappears _____m   where disk reappears _____ m

OR

❏ Secchi Disk reaches the bottom and does not disappear.
   to water surface _____ m   depth to the bottom of the water site ___

Secchi Disk Test 2:
Distance from observer to:

to water surface _____ m

where disk disappears _____m   where disk reappears _____ m

OR

❏ Secchi Disk reaches the bottom and does not disappear.
   to water surface _____ m   depth to the bottom of the water site ___

Secchi Disk Test 3:
Distance from observer to:

to water surface _____ m

where disk disappears _____m   where disk reappears _____ m

OR

❏ Secchi Disk reaches the bottom and does not disappear.
   to water surface _____ m   depth to the bottom of the water site ___

Transparency Tube
Transparency Tube Test 1: _____ cm
❏ Greater than depth of Transparency Tube

Transparency Tube Test 2: _____ cm
❏ Greater than depth of Transparency Tube

Transparency Tube Test 3: _____ cm
❏ Greater than depth of Transparency Tube

Comments: _____

_____

Water Temperature: Measured with (check one) __ alcohol-filled thermometer __ probe

Temperature Test 1: _____ ºC

Temperature Test 2: _____ ºC

Temperature Test 3: _____ ºC

Comments: _____

_____

Dissolved Oxygen:
Dissolved Oxygen kit: Manufacturer _____ Model _____ Salinity _____ (ppt)

Dissolved Oxygen Test 1: _____ (mg/L)

Dissolved Oxygen Test 2: _____ (mg/L)

Dissolved Oxygen Test 3: _____ (mg/L)

Dissolved Oxygen probe: Manufacturer _____ Model _____

	Probe Measure	**Salinity Correction Factor**	**Dissolved Oxygen (mg/L)**
Test 1			
Test 2			
Test 3			

Note: Salinity correction factor is taken from the manufacturer's instructions for the probe.

Comments: _____

_____

Electrical Conductivity:
Temperature of water sample being tested: ____°C
Conductivity of standard: _____ MicroSiemens/cm (µS/cm)

Conductivity Test 1: _____ µS/cm

Conductivity Test 2: _____ µS/cm

Conductivity Test 3: _____ µS/cm

Comments: _____

_____

Salinity
Tide Information

Time of High or Low Tide before Salinity Measurement (UTC 24hr): _____

Check one: ❑ High Tide: ❑ Low Tide

Time of High or Low Tide after Salinity Measurement (UTC 24hr): _____

Check one: ❑ High Tide: ❑ Low Tide

Location of tide: _____

Latitude of Measurement: _____ ❑ North ❑ South (of the equator)

Longitude of Measurement: _____ ❑ East ❑ West (of the prime meridien)

Salinity kit *(for Salinity Titration samples)*   manufacturer _____ model _____

Salinity (Complete for method used)

Hydrometer Method

	Temperature of water sample in 500 mL tube (˚C)	**Specific Gravity**	**Salinity of Sample (ppt)**
Test 1			
Test 2			
Test 3			

Salinity Titration Method

Salinity Test 1: _____ ppt

Salinity Test 2: _____ ppt

Salinity Test 3: _____ ppt

Comments: _____

_____

Water pH: Measured with: (check one) ❐ pH Paper ❐ pH Meter

If salt added, conductivity (µS/cm)	pH
1.	
2.	
3.	

Value of buffers used: ❐ pH 4 ❐ pH 7 ❐ pH 10 (Check all used)

Comments: _____

_____

Alkalinity:

Alkalinity kit: manufacturer _____ model _____

Kit used reads alkalinity directly

Alkalinity Test 1: _____ mg/L as CaCO3

Alkalinity Test 2: _____ mg/L as CaCO3

Alkalinity Test 3: _____ mg/L as CaCO3

Kit used counts drops

	Number of drops	X	Conversion constant for your kit	=	Alkalinity (mg/L as CaCO$_3$)
Test 1					
Test 2					
Test 3					

Comments: _____

_____

Nitrate

Nitrate kit: manufacturer _____ model _____

	Nitrate and Nitrite (mg/L NO$_3^-$N + NO$_2^-$N)	Nitrate (mg/L NO2-N) *Optional*
Test 1		
Test 2		
Test 3		

Comments: _____

_____

SEE GLOBE CLOUD CHART FOR VISUAL REFERENCE

School/Observer Name:_____ Study Site:_____

Date (ex. 2017 01 13): Year: _ _ _ _ Month: _ _ Day: _ _

Time (ex. 24 Hour Clock: 14 26): Local: Hour _ _ Minute _ _   Universal: Hour _ _ Minute _ _
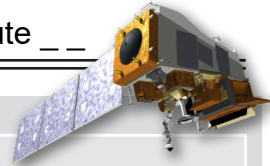
1. What is in Your Sky?

Total Cloud/Contrail Cover:

○ Sky is Obscured ⟶

○ None (Go to box 2)   ○ Scattered (25-50%)
○ Few(<10%)   ○ Broken (50-90%)
○ Isolated (10-25%)   ○ Overcast (90-100%)

○ Fog   ○ Sand
○ Heavy Rain   ○ Spray   ○ Haze
○ Heavy Snow   ○ Smoke   ○ Volcanic Ash
○ Blowing Snow   ○ Dust

Go to box 6

*If you can observe sky color or visibility, complete box 2

2. Sky Color and Visibility

Color (Look Up): ○Cannot Observe   ○Deep Blue   ○Blue   ○Light Blue   ○Pale Blue   ○Milky
Visibility (Look Across): ○Cannot Observe   ○Unusually Clear   ○Clear   ○Somewhat Hazy   ○Very Hazy   ○Extremely Hazy

3. High Level Clouds

○ No High Level Clouds Observed
    (Go to box 4)
Cloud Type:
   ○ Contrails (number of): ⟶   [#] short-lived   [#] persistent   [#] persistent spreading
   ○ Cirrus
   ○ Cirrocumulus
   ○ Cirrostratus

Cloud Cover :
○ Few   (<10%)
○ Isolated   (10%-25%)
○ Scattered (25%-50%)
○ Broken   (50%-90%)
○ Overcast (>90%)

Visual Opacity:
○ Opaque
○ Translucent
○ Transparent

4. Mid Level Clouds

○ No Mid Level Clouds Observed (Go to box 5)

Cloud Type:
○ Altostratus   ○ Altocumulus

Cloud Cover :
○ Few   (<10%)
○ Isolated   (10%-25%)
○ Scattered (25%-50%)
○ Broken   (50%-90%)
○ Overcast (>90%)

Visual Opacity:
○ Opaque
○ Translucent
○ Transparent

5. Low Level Clouds

○ No Low Level Clouds Observed (Go to box 6)
Cloud Type:
○ Fog   ○ Stratus
○ Nimbostratus   ○ Cumulus
○ Cumulonimbus   ○ Stratocumulus

Cloud Cover :
○ Few   (<10%)
○ Isolated   (10%-25%)
○ Scattered (25%-50%)
○ Broken   (50%-90%)
○ Overcast (>90%)

Visual Opacity:
○ Opaque
○ Translucent
○ Transparent

6. Surface Conditions

Mandatory:

	Yes	No		Yes	No
Snow/Ice	○	○	Dry Ground	○	○
Standing Water	○	○	Leaves on Trees	○	○
Muddy	○	○	Raining/Snowing	○	○

Optional:
You may submit any or all

Temperature: ____°C
Barometric Pressure: ____mb
Relative Humidity: ____%

Comments:

HYDROSPHERE