



## Data Collection Worksheet

**Please Note:** The Data Collection Worksheet (DCW) is a tool to aid integration of a PhenX protocol into a study. The PhenX DCW is not designed to be a data collection instrument. Investigators will need to decide the best way to collect data for the PhenX protocol in their study. Variables captured in the DCW, along with variable names and unique PhenX variable identifiers, are included in the PhenX Data Dictionary (DD) files.

### Test of Oral and Speech Motor Control

Lips (CN VII)			
	Structure at rest:		
	1	Symmetry	
	2	Relationship (open vs. closed)	
	Oral function:		
	3	Rounding	
	4	Protrusion	
	5	Retraction	
	6	Alternate pucker & smile	
	7	Bite lower lip	
	8	Lip Seal	
	9	Puff Cheeks	

		10	Open & close lips
	Speech function:		
		11	Rounding /o:/
		12	Protrusion /u:/
		13	Retraction /i:/
		14	Alternate /u i/
		15	Bite lower lip /f/
		16	Open & close lips /ma/

**Mandible (CN V)**

	Structure at rest:		
		17	Symmetry
		18	Occlusion
		19	Size (re: facial features)

	Oral function:		
		20	Excursion (click teeth 5x)

**Maxilla**

	Structure at rest:		
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		21	Symmetry
		22	Size
<b>Teeth</b>			
	Structure at rest:		
		23	Decay
		24	Alignment
		25	Gaps
		26	Missing
		27	Occlusion (re: maxillary teeth)
<b>Tongue (CN XII)</b>			
	Structure at rest:		
		28	Symmetry
		29	Carriage
		30	Fasciculations
		31	Furrowing
		32	Atrophy
		33	Hypertrophy

	Oral function:		
		34	Protrusion
		35	colspan="12"idge
		36	Anterior-posterior sweep
		37	Interdental
	Speech function:		
		38	Elevation to alveolar ridge /n/, /t/, or /l/
		39	Touch lateral edges of tongue to teeth /s/ or /ʔ/
		40	Interdental /θ/
		41	Posterior tongue to palate /k/ or /g/
<b>Velopharynx (CN X)</b>			
	Structure at rest:		
		42	Symmetry
		43	Uvula
		44	Tonsils
		45	Vault height
		46	Palatal juncture (palpate)

	Oral function:		
	47	Blow on cold mirror	
	48	Suck through straw	
	Speech function:		
	49	/a:/	
	50	/ha.ha.ha/	
<b>Larynx-Respiration (CN X)</b>			
	Structure at rest:		
	51	Posture during quiet breathing	
	Oral function:		
	52	Cough, laugh, or cry	
	Speech function:		
	53	Pitch variation	
	54	Loudness variation	
	55	/ha.ha.ha/	
<b>Coordinated Speech Movements - Articulatory Accuracy</b>			
	56	/pa/ repetitions	

		57	/ta/ repetitions
		58	/ka/ repetitions
		59	/pataka/ repetitions
		60	"pattycake" repetitions
		61	"you"
		62	"top"
		63	"beef"
		64	"fume"
		65	"cowboy"
		66	"band-aid"
		67	"half time"
		68	"banana"
		69	"kitty cat"
		70	"puppy dog"
		71	"communicate"
		72	"1950"
		73	"potato head"

		74	"Winnie the Pooh"
<b>Speech Sample</b>			
	Prosody:		
		75	Rate
		76	Intonation
	Voice:		
		77	Pitch
		78	Loudness
		79	Quality
		80	Nasal resonance

\* 1=normal, 0=abnormal

\*\*2=adult-like function, 1=emerging skill but not with adult-like precision, 0=absent function

**Mean (M) and Standard Deviation (SD) of Rate and Duration Measures for Each Age Group and for the Entire Sample**

	/pa/		/ta/		/ka/		/pəɾəkək/		patticake		Max p
Age group	M	SD	M	SD	M	SD	M	SD	M	SD	M
2:6–2:11	3.70	0.86	3.70	0.76	3.65	0.49	1.00	0.27	1.26	0.11	5.55
3:0–3:5	4.66	0.80	4.56	1.02	3.82	1.45	1.06	0.29	1.36	0.32	5.51

3:6–3:11	4.81	1.20	4.78	1.13	4.83	0.57	1.76	0.90	1.75	0.83	7.79
4:0–4:5	4.89	1.12	4.77	1.05	4.58	1.08	1.37	0.28	1.56	0.25	8.01
4:6–4:11	4.64	0.82	4.46	0.62	4.29	0.57	1.34	0.27	1.33	0.10	9.22
5:0–5:5	4.76	0.84	4.82	0.85	4.56	0.94	1.40	0.43	1.58	0.28	8.06
5:6–5:11	5.09	0.44	5.22	0.45	4.91	0.25	1.58	0.19	1.65	0.21	9.42
6:0–6:5	5.36	0.64	5.32	0.48	4.94	0.28	1.45	0.25	1.61	0.23	10.99
6:6–6:11	5.51	0.43	5.37	0.72	4.85	0.71	1.72	0.19	1.64	0.26	11.47
Total Sample	4.85	0.92	4.80	0.91	4.51	0.88	1.43	0.44	1.54	0.38	8.51

Structure and Function	structure	function
RAW SCORE		
	↓	↓
Z SCORE		

Age group	Structure						Function					
	n	M	SD	SE	Min-Max scores	Range	n	M	SD	SE	Min-Max scores	
2:6–2:11	10	22.5	0.8	0.3	22–24	2	8	97.0	9.2	3.3	78–106	
3:0–3:5	10	23.5	0.8	0.3	22–24	2	10	99.3	8.5	2.7	86–109	



3:6–3:11	10	23.0	1.2	0.4	20–24	4		8	107.1	3.8	1.3	99–111
4:0–4:5	10	23.4	0.8	0.3	22–24	2		9	108.1	2.1	0.7	104–111
4:6–4:11	10	22.4	1.7	0.5	20–24	4		9	109.3	2.1	0.7	106–112
5:0–5:5	10	23.3	0.7	0.2	22–24	2		8	109.8	2.6	0.9	106–112
5:6–5:11	10	23.0	1.2	0.4	21–24	3		10	109.8	2.6	0.8	103–112
6:0–6:5	10	22.0	2.0	0.6	18–24	6		9	110.6	1.3	0.4	108–112
6:6–6:11	10	22.4	1.1	0.3	20–24	4		10	111.1	1.2	0.4	108–112
Total sample	90	22.8	1.3	0.1	18–24	6		81	107.0	6.5	0.7	78–112

Protocol source: <https://www.phenxtoolkit.org/protocols/view/201601>