Imagination Station (Istation):

Universal Screener Instrument Development for Grade 7

Technical Report 12-02

Imagination Station (Istation):

Universal Screener Instrument Development for Grade 7

Pooja Shivraj ¦ Leanne R. Ketterlin-Geller ¦ Diane G. Gifford

Southern Methodist University

Summer 2012

&
&
0
, -0
.

, .
.

- , , , ,
. .
.

0 . . . , ,
.

,
, , , , , , .
.

Abstract

,
( ).

- .
. ,
. , . ,
- .

Table of Contents

!

!

!

!

!

!

- !

!

!

!

Imagination Station (Istation): Universal Screener Instrument Development for Grade 7

Introduction

.

.

. *Conceptual understanding*

Item Writing Process

,

. ,

Teacher Review

-
-
-
-

•

,

What is the most appropriate measurement unit for the length of a sub or hoagie?”

.

•

- .

.

.

/ ( )

/

( ) /

( ) /

(*and*).

,

.

, ,

, , , .

.

.

,

, .

0 .

.

.

Conclusions

.

. ,

. ,

. ,

-

References

( ),
( ), & ( ). ( ). *Standards for educational and psychological testing*. , .

- , . . (00).
. *Journal of Technology, Learning, and Assessment, 4*( ).
// . . / / /

- , . . (00).

. *Educational Measurement: Issues and Practice, 27*( ), - . 0. / .
- . 00 .00 .

, ., , . & , . (.). (00). *Adding it up: Helping children learn mathematics*. , .

Content Sampling Matrix

Appendix B: Content Description

$%&%'$6 7 8+9

!"#$%&"'(&) *(#'%($+,+'+)&(")(%-./%''(0&1(2(+&34#$+&5(6/03"+)&'("70"("7%1(8#'"(/%./%'%&"(*+"7(+&9+&+'"%($%3+804':(

!"#$%&"'(3)&&%3"("7%+/(*)/;(*+"7($+,+$+&5(6/03"+)&'(")(()6("7%(6)/8(0-(<(=2(*7%/%(0(0&$(=(0/%(6/03"+)&':(

!"#$%&"'(#'%(./).)/"+)&'(")((/%40"+&5(")(0(.).#40"+)&()&("7%(=0'+'()6(0('08.4%(0&$(%,04#0"%("7%(/%0')&0=4%&%''

!"#$%&"'((")(80;%(0&$(+&"%/./%"(7+'")5/08'(0&$(3+/34%(5/0.7'

!"#$%&"'((")(80;%(0../)-+80"%(./%$+3"+)&'(

>&"%/./%"($0"0(")(./),+$%("7%(=0'+'(6)/(./%$+3"+)&'(0&$(")(%'"0=4+'7(%-.%/+8%&"04(./)=0=+4+"+%'

?%"%/8+&%("7%(,04+$+"1()6('08.4+&5(8%"7)$'(")(./%$+3"()#"3)8%'

?%"%/8+&%("7%()#"3)8%()6(0&(%-.%/+8%&"(0&$(./%$+3"(*7+37(%,%&"'(0/%(4+;%41(0&$(#&4+;%412(0&$(+6("7%(%-.%/+8%&"(+'(60+/()/(#&60+/

?%'+5&(0&$(3)&$#3"(0&(%-.%/+8%&")("%'"(./%$+3"+)&'

@)8.0/%(03"#04(/%'#4"'(")(./%$+3"%$(/%'#4"'

!"#$%&"'('%4%3"2(A#'"+612(0&$(#'%(0../)./+0"%('18=)4+3(/%./%'%&"0"+)&'(6)/(5+,%&('+"#0"+)&':(

B'%(045%=/0+3("%/8+&)4)51(C%:5:2(,0/+0=4%2(%D#0"+)&2("%/82(3)%69+3+%&"2(+&%D#04+"12(%-./%''+)&2(3)&'"0&"E(3)//%3"41

B'%(,0/+0=4%'(0&$(0../)./+0"%().%/0"+)&'(")(*/+"%(0&(%-./%''+)&2(0&(%D#0"+)&2(0&(+&%D#04+"12()/(0('1'"%8()6(%D#0"+)&'()/(+&%D#04+"+%'("70"(/%./%'%&"'(0(,%/=04($%'3/+."+)&(C%:5:2("7/%%(4%''("70&(0(&#8=%/2(7046(0'(40/5%(0'(0/%0(FE(

! "#$%& '#(! "#$%&' (&%) * '$#+(&$+&"%, "%-%($&'&. * (/$#+(&."+ 0&'&$' 12%&+.&3 '2*%-

! "#$%&)#* ' 45%($#.6&' (5&, 2+$&+"5%"%5&, '#"-&#(&'22&.+*"&) * '5"' ($-&+.&$7%&/++"5#('$%&, 2' (%&&

*! "#$%&$$ ' ( ) *+, (- (. /$*+, -$0(1 - (/, 2$*+, -$345(6,)$*

. /0/1234, 56+, 67, - /89:+, -4, 562;6+, -6794, 56;28 < 71+96:26- / : /8 < 4, /6978;+=/6+8/+96+, -60217 < /962;6:>8/ /?-4 < / , 942, +16 9>+3/96

"#) !#' 96&5%/+0, +-#(:&$; +<&' (5&$7"%%<5#0%(-#+('2&-7', %-&#($+&- 0 '22%"=&/+0, +(%($&-7', %-=&-$*5%($-&@4, -6978;+=/6+8/+9&' (5& 5%3%2+, &' (5&>*-$#.6&.+" 0 *2' -&.+"&$7%&-*". ' /%&' "%' -&' (5&3+2* 0%-&+.&, "#- 0 -&' (5&/62#(5%"-&&

"#) A#' ?-&-$*5%($-&5%/+0, +-%&, "#- 0 -&' (5&/62#(5%"-&16&-2#/#(:&$7% 0=&$7%6&5%3%2+, &' (5&7, - /89:+, -6;28 < 71+96;286:>/4860217 < /9& @A+2* 0%&B&?"% '&+.&1' -%&C&D%#: 7$E&

"#) $#' F$*5%($-&' , , 26&$7%-%&.+" 0 *2' -&#(&, "+12% 0&-+23#(:&$+&5%$%" 0#(%&0217 < /962;63849 < 96+, -6=B14, - /89

"#) .#' F$*5%($-&-%%&$7' $&$7%&

!"#$%&"'()**+,("-%./(01/2(1&(*/1*1/".1&)+.",("1(3(.&4+#$.&5(41&6%/".&5() 71&5($.88%/%&"
#&."'(18(7%)'#/%7%&"("1('1+6%(*/19+%7'(.&61+6.&5(/)"%'('#4-()'(71".1&()"()(41&'")&"('*%%$:(

!"#$%&"'()+'1((0-%&("-%,(01/2(0."-("-%(4./4#78%/%&4%3(/)$.#'3()&$($.)7%"%/(18()(4./4+%;(0-%&("-%,(
<.&$("-%()/%)(18()('%4"1/(18()(4./4+%;()&$(0-%&("-%,(7)2%('4)+%($/)0.&5':

*!"#$%&$'()**

9.3.$6/.7:-4

! "#$%& '#(! "#$"%& ' "#()*+$, ++%)$(+)- . /"0 '#)#' *#+$#)01)/+ . 2)%' 3 *+/#)450 '%$"%&6%. $' / . 2)%' 3 *+/#7) , (02+)%' 3 *+/#7)"%$+&+/#7)/ . $"0%. 2) %' 3 *+/#7). %8)"// . $"0%. 2)%' 3 *+/#9)

! "#$%& '#) * : %8+/#$. %8)$(+)3+. %"%&)01)$(+). *#02 '$+)- . 2 '+)01).)%' 3 *+/;)"%$+/</+$)$(+). *#02 '$+)- . 2 '+). #)$(+)8"#$. %5+)01)$(+)%' 3 *+/)1/03) =+/0)0%).)%' 3 *+/)2"%+;). %8)8+$+/3 "%+)$(+). *#02 '$+)- . 2 '+)01)/+. 2)%' 3 *+/#

! "#$%& '#) >+50&%"=+)$(+)8"11+/+%5+)*+$, ++%)/ . $"0%. 2). %8)"// . $"0%. 2)%' 3 *+/#

! "#$%& '#' ?2. 5+)/ . $"0%. 2). %8)"// . $"0%. 2)%' 3 *+/#)4. <</0@"3 . $"0%#9)0%).)%' 3 *+/)2"%+). %8)A '#$"1B)$(+)<2. 5+3+%$)01)$(+)%' 3 *+/

! "#$%& '#(" C2. ##"1B)"// . $"0%. 2)%' 3 *+/#). #)%0%D/+<+. $"%&6%0%D$+/3 "%. $"%&)8+5"3 . 2#

! "#$%& '#+ E"%8)$(+)503 30%)1. 5$0/#). %8)&/+. $+#$)503 30%)1. 5$0/)01)$, 0)0/)30/+)%' 3 *+/#

! "#$%& '#,

! "#$%&'#( )

! "#$%&'#*)

! "#$%&'#(+

! "#$%&'#(,

! "#$%&(#(

! "#$%&'#' (

! "#$%&(#*

! "#-#)

! "#-#,

! "#-#"

! "#$%& '#(!"#$%&'()%*#)+&,*%)-$,.#/)*(01%#$23#/)-$").#,3)1')-)+&,*%)%+&-$,.#

! "#$%& '#) 450.1+#)%*#)+#.-%&1$3*&0)6#%7##$)%*#).#$,%*3)1')%*#)%*+##)3&"#3)1')-)+&,*%)%+&-$,.#)%1)"#8#.10)%*#)9(%*-,1+#-$):*#1+#;

! "#$%& '#"